

STAFF REPORT  
GEOMAX/MALK, LLC  
LOT 7, COTTAGE GROVE INDUSTRIAL PARK  
SITE DESIGN REVIEW SDR 2-24  
JULY 15, 2024

PROPOSAL DESCRIPTION

Date application filed: May 24, 2024

Date application complete: June 13, 2024

Owner: Malk, LLC  
Attn: Kevin Solonsky  
6211 Vorlich Lane  
Bethesda, MD 20816

Applicant: Geomax  
Ric Christian  
806 N. 9<sup>th</sup> Street  
Cottage Grove, OR 97424

Location: Lot 7, Cottage Grove Industrial Park  
Map 20-03-32-43 TL 500

Present Conditions: Vacant Lot

Proposed Use: Construction of a 15,720sqft building that will contain seven separate rental spaces.

Comp Plan Designation: I Industrial

Zoning: M Industrial

Proposal: The applicant has submitted plans to construct a 15,720sqft industrial building, containing seven (7) rental spaces of 30' x 68', on a vacant industrial lot in the Cottage Grove Industrial Park. Each rental unit will have a 12' x 16' office space with a handicap accessible restroom and a 12' x 14' roll-up door and a standard entrance on the front façade. The units face south, towards a 20 space parking lot. The applicant proposes a 1.31' rear setback, 10' side setback to the north and a 59' side setback to the south. There are two landscaping islands spaced along the parking area and a 7' wide landscaping buffer.

COMMENTS RECEIVED

Engineering comments were received on June 21, 2024 by City Planner Eric Mongan, and are included as Exhibit A.

Comments were requested from Damien Gilbert, Branch Engineering. After review, Mr. Gilbert stated there were no additional comments.

Comments were requested from Danny Solesbee, South Lane Fire and Rescue District Fire Marshall. After review, Mr. Solesbee stated there were no additional comments.

**APPROVAL CRITERIA; SDR 2-24**

***Chapter 14.42.600 Site Design Review Approval Criteria.*** *The review authority shall make written findings with respect to all of the following criteria when approving, approving with conditions, or denying an application:*

- 1. The application is complete, as determined in accordance with Chapter 14.41 – Types of Applications and Section 14.42.500, above;*

**Staff response and findings of fact:**

The application was submitted on May 31, 2024 and deemed complete on June 13, 2024. This criterion is met.

- 2. The application complies with all of the applicable provisions of the underlying Land Use District (Chapter 2), including: building and yard setbacks, lot area and dimensions, density and floor area, lot coverage, building height, building orientation, architecture, and other special standards as may be required for certain land uses;*

**Staff response and findings of fact:**

Criteria and findings listed below –

***Table 14.24.110 Land Use in Industrial Districts (M, BP)***

Table 14.24.110 identifies the land uses that are allowed in the Industrial Districts. The specific land use categories are described and uses are defined in Chapter 14.13 and 14.14.

**TABLE 14.24.110 Land Use in Industrial Districts (M, BP)**

Key:

P = Permitted, subject to land use/site review

CU = Conditional Use permit required (Chapter 14.44)

MP = Master Plan required (Chapter 14.45)

N = Not permitted

<b>USE Categories (Examples of uses are in Chapter 14.14; definitions are in Chapter 14.13)</b>	<b>Industrial (M)</b>	<b>Business Park (BP)</b>
<b>Residential Categories</b>		
<b>Household Living</b>		
All Residential Uses	N	N
<b>Commercial Categories</b>		
Drive-up/Drive-in/Drive-through (drive-up windows, kiosks, ATM's, similar uses/facilities), per Section <a href="#">14.23.190</a>	N	N
Bed and Breakfast Inn	N	N
Educational Services, not a school (e.g., tutoring or similar services)	N	MP
Entertainment, Major Event	N	N
Office		
- Primary use	N	MP
- Accessory Use	P	P
Outdoor recreation, Commercial	N	N
Parking Lot (when not an accessory use)	CU	N
Quick Vehicle Servicing. (See also Drive-Up/Drive-In/Drive-Through Uses, per Section <a href="#">14.23.190</a> )	N	N
Vehicle Repair	CU	N
Retail Sales and Service		
- Accessory to primary use	CU	N
<b>Industrial Categories</b>		
Light Industrial Service	P	MP
Medium/Heavy Industrial Service	N	N
Light Manufacturing and Production		
- Fully enclosed (e.g., office)	P	MP
- Not enclosed	CU	N
Medium/Heavy Manufacturing and Production	CU	N
Warehouse and Freight Movement	CU	N
Self-Service Storage	P	N

USE Categories (Examples of uses are in Chapter 14.14; definitions are in Chapter 14.13)	Industrial (M)	Business Park (BP)
Waste-Related	CU	N
Wholesale Sales	P	MP
Business Park Retail Commercial	N	MP
Business Park Service Commercial	N	MP

**Staff response and findings of fact:**

No specific businesses are proposed at this time. When a new business moves into the rental spaces, a Change of Use Type I application shall be required to ensure conformity to this table, and if applicable, the Type III Conditional Use application. This criterion is met as conditioned.

**14.24.120 Industrial Districts – Setback Yards, Industrial Buffers**

**A. Purpose.** *Setback yards and buffers provide separation between industrial and non-industrial uses for fire protection/security, building maintenance, sunlight and air circulation, noise buffering, and visual separation.*

**B. Applicability.** *The setback yard and buffer standards in subsections 14.24.120.C-F are minimum standards that apply to buildings, accessory structures, parking areas, mechanical equipment, and other development (but not buffers as required under subsection G). In granting a Conditional Use Permit, the approval body may increase the standard yards and/or buffers consistent with the criteria in Chapter 14.44. The approval body may also decrease the standard yards and/or buffers through the Conditional Use Permit process, provided that all applicable building and fire safety codes are met.*

**C. Front and Street Yard Setbacks.**

1. *Industrial (M) District: Minimum of 20 feet.*
2. *Business Park (BP) District: Minimum of 25 feet from designated arterial streets, 20 feet from collector streets, and 15 feet from local streets.*

**Staff response and findings of fact:**

The applicant proposes a 22.3’ front setback from Getty Circle. This criterion is met as proposed.

**D. Rear Yard Setbacks.**

1. *Adjacent to a Commercial or Industrial District: Minimum of 10 feet, except common wall buildings with 0-setback are allowed;*
2. *Abutting a Residential District: Minimum of 20 feet, and conformance with the R/R-1 height step-down standards in Section 14.22.170.C.*

**Staff response and findings of fact:**

The applicant proposes a 5.94' rear setback that tapers into a 1.31' setback. The parcel (TL 1200) on the west side of the subject parcel is owned by the City of Cottage Grove, and is encumbered by the relocated wetlands from the Industrial Park (DSL removal-Fill Permit #FP-14915 and USACE 404 Permit #96-134). In addition, there is a 50ft wide easement that encumbers the eastern side of TL 1200.

Due to both of these factors, staff feels that while the proposed development does not meet the 10' rear setback, both of the encumbrances on the abutting parcel make it so that no additional development will be located within 50' of the new building, meeting the intent of the code. This criterion is met as proposed.

***E. Side Yard Setbacks.** There are no required side-yard setbacks, except a minimum of 20 feet and conformance with the R/R-1 height step-down standards in Section 14.22.170.C is required when an Industrial District abuts an R or R-1 District.*

**Staff response and findings of fact:**

While there are not any required side setbacks in the Industrial District, the north side yard setback is proposed to be 10', while the southern side yard setback is proposed to be 59'. The subject parcel does not abut an R or R-1 District. This criterion is met as proposed.

***F. Minimum Landscape Area (% site area).** The minimum landscape area for M Industrial District shall be 5%. The minimum landscape area for BP Industrial District shall be 20%. Landscape area may include plant areas and some non-plant areas as allowed under Section 14.32.300.D.*

**Staff response and findings of fact:**

The subject parcel is a total of 42,702.5sqft. The applicant proposes approximately 6,890sqft of landscaping, which is approximately 16% of the total site. This also includes the parking lot landscaping, which is addressed later in this staff report. This criterion is met as proposed.

***G. Buffering Other Yard Requirements.***

*1. **Buffering.** The approval body may require landscaping, fences, walls or other buffering that exceed the landscaping standards in Chapter 14.32 when it finds through Site Design Review (Chapter 14.42), Conditional Use Permit review (Chapter 14.44), and/or Master Planned Development review (Chapter 14.45), as applicable, that more or different buffering is necessary to mitigate adverse noise, light, glare, and/or aesthetic impacts to adjacent properties.*

*Developments within Industrial Districts abutting Residential Districts will be required at minimum to erect a fence, evergreen hedge or wall along the property line that is the zone boundary. The approval body may also require a fence, evergreen hedge or wall to be erected to screen the view of storage yards and operations not enclosed in a building. The fence, hedge or wall shall screen not less than 70 percent of the view and be between 5 and 8 feet in height.*

*2. **Pedestrian Access.** The approval body may require the construction of pedestrian access ways through required buffers to ensure pedestrian connections within large developments,*

*between multiple development phases, or connecting to public sidewalks, walkways, or multi-use pathways. The design of access ways shall conform to Section 14.31.300.*

**Staff response and findings of fact:**

As proposed the rent-a-shops format does not require additional buffering, however, if a use is proposed in the future that requires a Conditional Use permit, the Planning Commission will have the opportunity to address this criteria if deemed necessary. This criterion is not applicable at this time.

**14.24.130 Industrial Districts – Building Coverage**

*A. Industrial (M) District: Maximum building coverage, 80 percent.*

*B. Business Park (BP) District: Maximum building coverage, 70 percent.*

**Staff response and findings of fact:**

The subject parcel is a total of 42,702.5sqft, and the proposed structure is 15,720sqft. The maximum building coverage for the Industrial Zone is 80%. As proposed, the building coverage is 36%. This criterion is met as proposed.

**14.24.140 Industrial Districts – Site Layout and Design**

*A. Development Compatibility. Industrial uses and developments shall be oriented on the site to minimize adverse impacts (e.g., noise, glare, smoke, dust, exhaust, vibration, etc.) and to provide compatibility with adjacent uses to the extent practicable. The following standards shall apply to all development in the Industrial and Business Park Districts:*

- 1. Mechanical equipment, lights, emissions, shipping/receiving areas, and other components of an industrial use that are outside enclosed buildings, shall be located away from residential areas, schools, parks and other non-industrial areas to the maximum extent practicable; and*
- 2. The City may require a landscape buffer, or other visual or sound barrier (fence, wall, landscaping, or combination thereof), to mitigate adverse impacts that cannot be avoided, as provided in Section 14.24.120.*

**Staff response and findings of fact:**

The proposed development is located within the Cottage Grove Industrial Park, and is surrounded by other industrial uses, as well as a vacant, easement and wetland encumbered parcel owned by the City of Cottage Grove. This criterion is not applicable.

***B. Large-Scale Commercial Development – M District Only.*** *Developments containing 40,000 square feet or more commercial, retail, wholesale, or office floor area in an Industrial District shall have pedestrian-oriented design. This standard is satisfied when the approval body finds that a development meets the all of the following criteria:*

- 1. The commercial block layout standards in Section 14.23.150.D are met; and*
- 2. The architectural standards in Section 14.23.170 are met. For the purpose of meeting the build-to line standards in subsection 14.23.170.B(4), the build-to line is parallel to all abutting street property lines at a distance of 60 feet from the street property line.*

**Staff response and findings of fact:**

The proposed development is a total of 15,720sqft, therefore this criterion is not applicable.

**14.24.150 Industrial Districts – Building and Structure Height**

*The maximum allowable height of buildings and structures in the M districts is 35 feet, except that taller buildings and structures are allowed when approved as part of a Conditional Use Permit, provided they conform to the R/R-1 height step-down.*

**Staff response and findings of fact:**

The proposed structure is 19' tall. This criterion is met as proposed.

**14.24.160 Industrial Districts – Large Site Master Planning Requirements**

*Industrial land added to the Cottage Grove Urban Growth Boundary (UGB) to meet industrial land needs identified in the Cottage Grove Economic Opportunities Analysis (2009) shall be assigned a Master Planned Development (PD) overlay zone under Chapter 14.45, Master Planned Developments following annexation.*

*A. The minimum development area covered by this master plan shall be 20 acres.*

**Staff response and findings of fact:**

The subject lot is 0.98 acres. This criterion is not applicable.

- 3. The applicant shall be required to upgrade any existing development that does not comply with the applicable land use district standards, in conformance with Chapter 14.52, Non-Conforming Uses and Development;*

**Staff response and findings of fact:**

The subject parcel is vacant, therefore, this criterion is not applicable.

**Chapter 14.31 — Access and Circulation**

**14.31.200 Vehicular Access and Circulation**

- A. Intent and Purpose. The intent of this Section is to manage access to land uses and on-site circulation, and to preserve the transportation system in terms of safety, capacity, and function. This Section applies to all public streets within the City of Cottage Grove, and to all properties that abut these roadways. This Section implements the access management policies of the Cottage Grove Transportation System Plan.*
- B. Applicability. This Chapter applies to all public streets within the City and to all properties that abut these streets. The standards apply when lots are created, consolidated, or modified through a land division, partition, lot line adjustment, lot consolidation, or street vacation; and when properties are subject to Land Use Review or Site Design Review.*
- C. Access Permit Required. Access (e.g., a new curb cut or driveway approach) to a public street requires an Access Permit. An access permit may be in the form of a letter to the applicant, or it may be attached to a land use decision notice as a condition of approval. In*

*either case, approval of an access permit shall follow the procedures and requirements of the applicable road authority (i.e. Cottage Grove, Lane County or ODOT), Permits shall be processed as Type I applications, normally at time of Land Use Review. If the developer proposes exceptions to the standards of this chapter, the permit shall be processed as a Type II application.*

**Staff response and findings of fact:**

The applicant is proposing one access point off Getty Circle, on the southwestern end of the cul-de-sac. An access permit for this entrance shall be processed at time of Land Use Review, and is a condition of approval. This criterion is met as conditioned.

*D. State Access Permits. ODOT has responsibility and authority in managing access to State Highways. Projects with direct access onto a State Highway shall be required to obtain a State access permit. An approved State access permit must be submitted as part of all Type II and III land use permits. Conditions placed by the State upon these access permits shall be considered conditions of approval for all applicable development approvals.*

**Staff response and findings of fact:**

Getty Circle is not a State right-of-way. This criterion is not applicable.

*E. Traffic Study Requirements. The City may require a traffic study prepared by a qualified professional to determine access, circulation, and other transportation requirements in conformance with Section 14.41.900, Traffic Impact Study.*

*Per Section 14.41.900 the following trigger a TIS requirement:*

- 1. A change in zoning or a plan amendment designation that significantly affects a transportation facility per provisions of Section 14.47.800; or*
- 2. Any proposed development or land use action that a road authority states may cause or be adversely impacted by operational or safety concerns along its facility(ies); or*
- 3. Land divisions with 30 or more lots; or*
- 4. An increase in site traffic volume generation by 300 Average Daily Trips (ADT) or more; or*
- 5. An increase in peak hour volume of a particular movement to and from the State highway by 20 percent or more; or*
- 6. An increase in use of adjacent streets by vehicles exceeding the 20,000 pound gross vehicle weights by 10 vehicles or more per day; or*
- 7. The location of the access driveway does not meet minimum sight distance requirements, or is located where vehicles entering or leaving the property are restricted, or such vehicles queue or hesitate on the State highway, creating a safety hazard; or*
- 8. A change in internal traffic patterns that may cause safety problems, such as back up onto a street or greater potential for traffic accidents.*

**Staff response and findings of fact:**

The proposed application does not trigger any of the above listed criteria. This criterion is not applicable.



- F. *Conditions of Approval. The City may require the closing or consolidation of existing curb cuts or other vehicle access points, recording of reciprocal access easements (i.e., for shared driveways), development of a frontage street, installation of traffic control devices, and/or other mitigation as a condition of granting an access permit, to ensure the safe and efficient operation of the street and highway system.*

**Staff response and findings of fact:**

There are no existing approaches on this development site, therefore this criterion is not applicable.

- G. *Corner and Intersection Separation; Backing onto Public Streets. New and modified accesses shall conform to the following standards:*

1. *Except as provided under subsection 4, below, the distance from a street intersection to a driveway or other street access shall meet the minimum spacing requirements for the street's classification in the City's Transportation System Plan. No driveway approach may be located closer to the corner than 30 feet on local streets, 50 feet on collector streets, and 75 feet on arterials;*

**Staff response and findings of fact:**

The subject site's northern most corner is located approximately 130ft from the intersection of Getty Circle and Carnegie Way. This criterion is not applicable.

2. *When the above requirements cannot be met due to lack of frontage, the driveway may be located such that the driveway apron will begin at the farthest property line, but at no time shall new property access be permitted within 30 feet of an intersection. Where no other alternatives exist, the City may allow construction of an access connection at a point less than 30 feet from an intersection, provided the access is as far away from the intersection as possible (See Figure 3.1.200.G). In such cases, the City may impose turning restrictions (i.e., right in/out, right in only, or right out only);*

**Staff response and findings of fact:**

There is sufficient frontage and as described above, the applicant can meet minimum distances required. This criterion is not applicable.

3. *Access to and from off-street parking areas shall not permit backing onto a public street, except for single-family and two-family dwellings;*

**Staff response and findings of fact:**

The proposed project has sufficient space within the parking lot for vehicular circulation so as to not allow backing into a public street. This criterion is met as proposed.

4. *The City may reduce required separation distance of access points where they prove impractical due to lot dimensions, existing development, other physical features, or conflicting code requirements, provided all of the following requirements are met:*

- a. *Joint-use driveways and cross-access easements are provided in accordance with subsection 3.1.200.H;*
- b. *The site plan incorporates a unified access and circulation system in accordance with this Section; and*
- c. *The property owner(s) enter in a written agreement with the City, recorded with the deed, that pre-existing connections on the site will be closed and eliminated after construction of each side of the joint-use driveway.*

**Staff response and findings of fact:**

There is adequate required separation distance of access points for the proposed project. This criterion is not applicable.

- H. *Site Circulation. New developments shall be required to provide a circulation system that accommodates expected traffic on the site. Pedestrian connections on the site, including connections through large sites, and connections between sites (as applicable) and adjacent sidewalks, must conform to the provisions in Section 14.31.300.*

**Staff response and findings of fact:**

The proposed development contains a parking area of 20 parking spaces, as well as a fire turn-around dedicated area. The width of the driveway is 23ft. Pedestrian connections are addressed later in this staff report. This criterion is met as proposed.

- I. *Joint and Cross Access – Requirement. The number of driveway and private street intersections with public streets should be minimized by the use of shared driveways for adjoining lots where feasible. When necessary for traffic safety and access management purposes, or to access flag lots, the City may require joint access and/or shared driveways in the following situations as follows:*

- 1. *For shared parking areas;*

**Staff response and findings of fact:**

There is no proposed joint access nor a shared driveway. This criterion is not applicable.

- 2. *For adjacent developments, where access onto an arterial is limited;*

**Staff response and findings of fact:**

Getty Circle is not an arterial. This criterion is not applicable.

- 3. *For multi-tenant developments, and multi-family developments on multiple lots or parcels. Such joint accesses and shared driveways shall incorporate all of the following:*
  - a. *A continuous service drive or cross-access corridor that provides for driveway separation consistent with the applicable transportation authority's access management classification system and standards;*

- b. *A design speed of 10 miles per hour and a maximum paved width of 20 feet, in addition to any parking alongside the driveway; additional driveway width or fire lanes may be approved when necessary to accommodate specific types of service vehicles, loading vehicles, or emergency service provider vehicles;*
- c. *Driveway stubs to property lines (for future extension) and other design features to make it easy to see that the abutting properties may be required with future development to connect to the cross-access driveway;*
- d. *Fire Department-approved turnaround for service drives or driveways over 150 feet long.*

**Staff response and findings of fact:**

The applicant proposes an access point that is 23ft wide, as well as a fire department turnaround. The proposed parking area utilizes the fire department turnaround as a stub to the southern parcel. This criterion is met as proposed.

- J. *Joint and Cross Access – Reduction in Required Parking Allowed. When a shared driveway is provided or required as a condition of approval, the land uses adjacent to the shared driveway may have their minimum parking standards reduced in accordance with the shared parking provisions of Section 14.33.300.C.*

**Staff response and findings of fact:**

The applicant is not requesting a reduction in minimum parking standards. This criterion is not applicable.

- K. *Joint and Cross Access – Easement and Use and Maintenance Agreement. Pursuant to this Section, property owners shall:*
  - 1. *Record an easement with the deed allowing cross-access to and from other properties served by the joint-use driveways and cross-access or service drive;*
  - 2. *Record an agreement with the deed that remaining access rights along the roadway for the subject property shall be dedicated to the City and pre-existing driveways will be closed and eliminated after construction of the joint-use driveway;*
  - 3. *Record a joint maintenance agreement with the deed defining maintenance responsibilities of property owners.*

**Staff response and findings of fact:**

The entire property is under one ownership and there is no shared access proposed. This criterion is not applicable to the current proposal.

- L. *Access Connections and Driveway Design. All commercial and industrial driveway connections to a public right-of-way (access) and driveways shall conform to all of the following design standards:*

**Staff response and findings of fact:**

The project shall meet the design criteria as outlined by the Engineering comments, Exhibit A. This shall be a condition of approval. This criterion is met as conditioned.

M. *Fire Access and Turnarounds.* When required under the Uniform Fire Code, fire access lanes with turnarounds shall be provided. Except as waived in writing by the Fire Marshal, a fire equipment access drive shall be provided for any portion of an exterior wall of the first story of a building that is located more than 150 feet from an existing public street or approved fire equipment access drive. The drive shall contain unobstructed adequate aisle width of 20 feet with paved surface between 14-20 feet, an unobstructed vertical clearance of 13 feet 6 inches and approved turn-around area for emergency vehicles, as required by the current adopted Oregon Fire Code. The Fire Marshal may require that fire lanes be marked as “No Stopping/No Parking.” For requirements related to cul-de-sacs or dead-end streets, please refer to Section 14.34.100.N.

**Staff response and findings of fact:**

Fire Marshal Danny Solesbee has reviewed this proposal and determined that the proposed fire turnaround and access lane is adequate. The applicant shall stripe the fire turnaround and no parking shall be allowed within this space. This shall be a condition of approval. This criterion is met as conditioned.

N. *Vertical Clearances.* Driveways, private streets, aisles, turn-around areas and ramps shall have a minimum vertical clearance of 13 feet 6 inches for their entire length and width.

**Staff response and findings of fact:**

The proposed development does not have any structure or item that is above a driveway, private street, aisles, turn-around areas, or ramps. This criterion is not applicable at this time.

O. *Vision Clearance.* No visual obstruction (e.g., sign, structure, solid fence, or shrub vegetation) between 2 1/2 feet and 8 feet in height shall be placed in “vision clearance areas” on streets, driveways, alleys, or mid-block lanes, as shown in Figure 3.1.200.N. The minimum vision clearance area may be modified by the City Engineer upon finding that more or less sight distance is required (i.e., due to traffic speeds, roadway alignment, etc.). This standard does not apply to light standards, utility poles, trees trunks and similar objects.

**Staff response and findings of fact:**

The proposed project shall comply with the criterion. A 20’ vision clearance triangle shall be maintained at the driveway with no obstruction between 2.5’ – 8’ in height as a condition of approval. This criterion is met as conditioned.

P. *Construction.* The following development and maintenance standards shall apply to all driveways, parking areas, turnarounds, alleys and private streets:

1. *Surface Options.* Driveways, parking areas, alleys, aisles, and turnarounds may be paved with asphalt, concrete, or comparable surfacing, or an approved durable non-paving or porous paving material, excluding gravel, may be used to reduce surface water runoff and protect water quality. Driveway and street materials shall be subject to review and approval by the City Engineer.

**Staff response and findings of fact:**

Asphalt and concrete surface material will be used for driveways, parking areas, and sidewalks. This criterion is met as proposed.

2. *Surface Water Management. When non-porous paving is used, all driveways, parking areas, alleys, aisles, and turnarounds shall have on-site collection of surface waters to eliminate sheet flow of such waters onto public rights-of-way and abutting property. Surface water facilities shall be constructed in conformance with Chapter 14.35 and applicable engineering standards. Single-family and two-family dwellings shall be exempt from this standard.*

**Staff response and findings of fact:**

The applicant provided details showing compliance with the standards of Chapter 14.35.200. This criterion is met as proposed.

3. *Driveway Aprons. When driveway approaches or “aprons” are required to connect driveways to the public right-of-way, they shall be paved with concrete surfacing and conform to the City’s engineering design criteria and standard specifications. (See general illustrations in Section 14.31.200.L, above.)*

**Staff response and findings of fact:**

The driveway apron will be constructed with concrete/asphaltic concrete and shall be designed to conform with the City’s Engineering design criteria. This criterion is met as conditioned.

**14.31.300 Pedestrian Access and Circulation**

- A. *Site Layout and Design. To ensure safe, direct, and convenient pedestrian circulation, all developments, except single-family and two-family detached housing (i.e., on individual lots), shall provide a continuous pedestrian system. The pedestrian system shall be based on the standards in subsections 1-3, below:*

1. *Continuous Walkway System. The pedestrian walkway system shall extend throughout the development site and connect to all future phases of development, and to existing or planned off-site adjacent trails, public parks, and open space areas to the greatest extent practicable. The developer may also be required to connect or stub walkway(s) to adjacent streets and to private property with a previously reserved public access easement for this purpose, in accordance with the provisions of Section 14.31.200, Vehicular Access and Circulation, and Section 14.34.100, Transportation Standards.*

**Staff response and findings of fact:**

The on-site walkway system extends from Getty Circle to the west, running along the exterior of each individual unit adjacent to the parking area. This criterion is met as proposed.

2. Safe, Direct, and Convenient. Walkways within developments shall provide safe, reasonably direct, and convenient connections between primary building entrances and all adjacent streets, based on the following definitions:
  - a. Reasonably direct. A route that does not involve a significant amount of out-of-direction travel for likely users.
  - b. Safe and convenient. Routes that are reasonably free from hazards and provide a reasonably direct route of travel between destinations.
  - c. “Primary entrance” for commercial, industrial, mixed use, public, and institutional buildings is the main public entrance to the building. In the case where no public entrance exists, street connections shall be provided to the main employee entrance.
  - d. “Primary entrance” for residential buildings is the front door (i.e., facing the street). For multifamily buildings in which each unit does not have its own exterior entrance, the “primary entrance” may be a lobby, courtyard, or breezeway that serves as a common entrance for more than one dwelling.

**Staff response and findings of fact:**

The proposed walkway system is direct, safe and convenient. The walkway connects the right-of-way to each tenant entrance. This criterion is met as proposed.

3. Connections Within Development. Connections within developments shall be provided as required in subsections a-c, below:
  - a. Walkways shall connect all building entrances to one another to the extent practicable, as generally shown in Figure 14.31.300.A(1);

**Staff response and findings of fact:**

The proposed project complies with the criterion. Walkways connect individual shops to one another. This criterion is met as proposed.

- b. Walkways shall connect all on-site parking areas, storage areas, recreational facilities and common areas, and shall connect off-site adjacent uses to the site to the extent practicable. Topographic or existing development constraints may be cause for not making certain walkway connections, as generally shown in Figure 3.1.300.A(1); and

**Staff response and findings of fact:**

The proposed project complies with the criterion. This criterion is met as proposed.

- c. Large parking areas shall be broken up so that no contiguous parking area exceeds 3 acres. Parking areas may be broken up with plazas, large landscape areas with pedestrian access ways (i.e., at least 20 feet total width), streets, or driveways with street-like features. Street-like features, for the purpose of this section, means a raised sidewalk of at least 4-feet in width, with 6-inch curb, accessible curb ramps, street trees in planter strips or tree wells, and pedestrian-oriented lighting. (See also standards in Section 14.23.150.)

**Staff response and findings of fact:**

The subject parcel is 0.98ac, therefore, this criterion is not applicable.

B. *Walkway Design and Construction. Walkways, including those provided with pedestrian access ways, shall conform to all of the standards in subsections 1-5, as generally illustrated in Figure 14.31.300.B:*

1. *Vehicle/Walkway Separation. Except for crosswalks (subsection 2), where a walkway abuts a driveway or street, it shall be raised 6 inches and curbed along the edge of the driveway/street. Alternatively, the decision body may approve a walkway abutting a driveway at the same grade as the driveway if the walkway is protected from all vehicle maneuvering areas. An example of such protection is a row of decorative metal or concrete bollards designed for withstand a vehicle's impact, with adequate minimum spacing between them to protect pedestrians.*

**Staff response and findings of fact:**

The applicant has proposed a 5ft walkway that connects the development to Getty Circle. Due to the nature of the development (Industrial Use and subsequent roll-up doors to each tenant), staff acknowledges that a raised sidewalk or a protective barrier are not feasible. This criterion is met as proposed.

2. *Crosswalks. Where walkways cross a parking area, driveway, or street ("crosswalk"), they shall be clearly marked with striping or contrasting paving materials (e.g., light-color concrete inlay between asphalt), which may be part of a raised/hump crossing area.*

**Staff response and findings of fact:**

The applicant has proposed one crosswalk in the development, and is proposed to be striped. This shall be a condition of approval. This criterion is met as conditioned.

3. *Walkway Width and Surface. Walkway and accessway surfaces shall be concrete, asphalt, brick/masonry pavers, or other durable surface, as approved by the City Engineer, at least 5 feet wide. Multi-use paths (i.e., for bicycles and pedestrians) shall be concrete or asphalt, at least 10 feet wide. (See also, Section 14.34.100 - Transportation Standards for public, multi-use pathway standard.)*

**Staff response and findings of fact:**

The applicant has proposed 5ft wide sidewalks throughout the development. This criterion is met as proposed.

4. *Accessible routes. Walkways shall comply with applicable Americans with Disabilities Act (ADA) requirements. The ends of all raised walkways, where the walkway intersects a driveway or street shall provide ramps that are ADA accessible, and walkways shall provide direct routes to primary building entrances.*

**Staff response and findings of fact:**

Proposed walkways will be constructed to comply with ADA requirements. Sidewalks and handicap facilities must meet the current American Disabilities Act (ADA) Standards. This shall be a condition of approval. This criterion is met as conditioned.

5. *Sidewalk construction and maintenance.* Sidewalk construction and maintenance shall be the responsibility of the abutting property owner.

**Staff response and findings of fact:**

Any public sidewalks constructed as part of this application shall meet City standards and shall be the responsibility of the abutting property owner; see City Engineers comments.

**Chapter 14.32 — Landscaping, Street Trees, Fences and Wall**

*14.32.200 Landscape Conservation*

- A. *Applicability.* All development sites containing Significant Vegetation, as defined below, shall comply with the standards of this Section. The purpose of this Section is to incorporate significant native vegetation into the landscapes of development and protect vegetation that is subject to requirements for Sensitive Lands (Chapter 14.37). The use of mature, native vegetation within developments is a preferred alternative to removal of vegetation and re-planting. Mature landscaping provides summer shade and wind breaks, controls erosion, and allows for water conservation due to larger plants having established root systems.
- B. *Significant Vegetation.* “Significant vegetation” means individual trees and shrubs within designated Willamette River Greenway and/or Riparian areas, in accordance with Chapter 14.37, and trees not within a Sensitive Lands area that have a caliper of 8 inches or larger, except that protection shall not be required for plants listed as non-native, invasive plants by the Oregon State University (OSU) Extension Service in the applicable OSU bulletins for Lane County, and plants listed by the City as prohibited street trees and landscape plants. Non-native, invasive plants include, but are not limited to: purple loosestrife, leafy spurge, yellow starthistle, puncture vine, gorse, scotch broom, and non-native blackberry.
- C. *Mapping and Protection Required.* Significant vegetation shall be mapped as required by Chapter 14.42, Site Design Review, and Chapter 14.37, Sensitive Lands. Significant trees shall be mapped individually and identified by species and diameter or caliper at 4 feet above grade. A “protection” area shall be defined around the edge of all branches (drip-line) of each tree. Drip lines may overlap between trees. The City also may require an inventory, survey, or assessment prepared by a qualified professional when necessary to determine construction boundaries, building setbacks, and other protection or mitigation requirements.
- D. *Protection Standards.* Significant trees and shrubs identified as meeting the criteria in Section B, above, shall be retained to minimize the risk of erosion, landslide, and stormwater runoff. Where protection is impracticable because it would prevent reasonable development of public streets, utilities, or land uses permitted by the applicable land use district, the City



*may allow removal of significant vegetation from the building envelope as defined by required yard setbacks. Where other areas must be disturbed to install streets or utilities, the applicant may be required to restore such areas after construction with landscaping or other means to prevent erosion and to protect the public health, safety, and welfare. With the owner's consent, the City may accept a land dedication or become a party to a conservation easement on private property for conservation purposes.*

- E. Construction. All significant vegetation on a site that is not otherwise designated and approved by the City for removal shall be protected prior to, during, and after construction in accordance with a limit-of-clearing and grading plan approved by the City. The City may limit grading activities and operation of vehicles and heavy equipment in and around significant vegetation areas to prevent compaction, erosion, pollution, or landslide hazards.*
- F. Exemptions. The protection standards in "D" and "E" shall not apply to:
  - 1. Dead or Diseased Vegetation. Dead or diseased significant vegetation may be removed through a Type I Land Use Review.*
  - 2. Hazardous Vegetation and Other Emergencies. Significant vegetation may be removed without land use approval pursuant to Chapter 4 when the vegetation poses an immediate threat to life or safety, or the vegetation must be removed for other reasons of emergency (e.g., fallen over road or power line, blocked drainage way, or similar circumstance), as determined by the City or emergency service provider.**

**Staff response and findings of fact:**

The subject property is not located within the Willamette River Greenway, Riparian, or other Sensitive Lands area. There are no trees on the subject property, but there are existing street trees that were planted at the time of the industrial park development. The applicant shall avoid causing any damage to these trees during construction as a condition of approval. This criterion is met as conditioned.

**14.32.300 Landscaping**

- A. Applicability. This Section shall apply to all new developments requiring Site Design Review. This section is not applicable to single-family or two-family dwellings.*
- B. Landscaping Plan Required. A landscape plan is required. All landscape plans shall conform to the requirements in Chapter 14.42.500, Section B.5 (Landscape Plans).*

**Staff response and findings of fact:**

Please refer to the Preliminary Landscape Plan included with this application (Exhibit B). Generally, the proposed planting plan includes a mix of trees and shrubs placed at regular intervals to create a natural feel and ambiance for the tenants. This criterion is met as proposed.

- C. Landscape Area Standards. The minimum percentage of required landscaping equals:
  - 1. Industrial Districts. 5% of the site.**

**Staff response and findings of fact:**

The proposed project complies with the criterion. As defined above, the minimum percentage of required landscaping is 5% of the site. The applicant proposes to install landscaping to approximately 16% of the site, which includes grass, ground cover, and trees. This criterion is met as proposed.

D. *Landscape Materials. Permitted landscape materials include trees, shrubs, ground cover plants, non-plant ground covers, and outdoor hardscape features, as described below.*

*“Coverage” is based on the projected size of the plants at maturity, i.e., typically 3 or more years after planting.*

1. *Existing Vegetation. Existing non-invasive vegetation may be used in meeting landscape requirements. When existing mature trees are protected on the site (e.g., within or adjacent to parking areas) the decision making body may reduce the number of new trees required depending on the number and size of existing tree(s) protected.*
2. *Plant Selection. A combination of deciduous and evergreen trees, shrubs, and ground covers shall be used for all planted areas, the selection of which shall be based on local climate, exposure, water availability, and drainage conditions. When new vegetation is planted, soils shall be amended, as necessary, to allow for healthy plant growth.*
3. *“Non-native, invasive” plants, as per Section 3.2.200.B, shall be removed during site development and the planting of new invasive species is prohibited.*
4. *Hardscape features, i.e., patios, decks, plazas, etc., may cover up to 10 percent of the required landscape area. Swimming pools, sports courts, and similar active recreation facilities may not be counted toward fulfilling the landscape requirement.*
5. *Ground Cover Standard. All landscaped area, whether or not required, that is not planted with trees and shrubs, or covered with non-plant material (subsection 8, below), shall have ground cover plants that are sized and spaced as follows: a minimum of one plant per 12 inches on center in triangular spacing, or other planting pattern that is designed to achieve 75 percent coverage of the area not covered by shrubs and tree canopy.*
6. *Tree Size. Trees shall have a minimum diameter or caliper 4 feet above grade of 2 inches or greater at time of planting.*
7. *Shrub Size. Shrubs shall be planted from 5 gallon containers or larger.*
8. *Non-plant Ground Covers. Bark dust, chips, aggregate, or other non-plant ground covers may be used, but shall cover no more than 25 percent of the area to be landscaped and shall be confined to areas underneath plants. Non-plant ground covers cannot be a substitute for ground cover plants.*
9. *Significant Vegetation. Significant vegetation protected in accordance with Section 14.32.200 may be credited toward meeting the minimum landscape area standards. Credit shall be granted on a per square foot basis. The Street Tree standards of Section 14.32.400 may be waived by the City when existing trees protected within the front or street side yard provide the same or better shading and visual quality as would otherwise be provided by street trees.*
10. *Storm Water Facilities. Storm water treatment facilities (e.g., detention/retention ponds and swales designed for water quality treatment), when required under Section*

14.34.400, shall be landscaped with water tolerant, native plants, including native grasses.

**Staff response and findings of fact:**

Compliance with the Landscape Materials section will be required in all landscaping areas. The applicant has proposed numerous 3 gal plants; prior to issuance of building permits, an updated landscaping plan shall show compliance to the 5 gal minimum requirement; this shall be a condition of approval. This criterion is met as conditioned.

E. *Landscape Design Standards. All yards, parking lots, and required street tree planter strips that are required to meet the standards of this Section shall be landscaped to provide, as applicable, erosion control, visual interest, buffering, privacy, open space and pathway identification, shading, and wind buffering, based on the following criteria:*

1. Yard Setback Landscaping. *Landscaping in yards shall:*

- a. *Provide visual screening and privacy within side and rear yards and from incompatible adjoining uses or busy streets;*
- b. *Use shrubs and trees as wind breaks;*
- c. *Retain natural vegetation;*
- d. *Define pedestrian pathways and open space areas with landscape materials;*
- e. *Provide focal points within a development, for example, by preserving large or unique trees or groves, hedges, and flowering plants;*
- f. *Use trees to provide summer shading within common open space areas and within front yards when street trees cannot be provided;*
- g. *Use a combination of plants for year-long color and interest;*
- h. *Use landscaping to screen outdoor storage and mechanical equipment areas, and to enhance graded areas such as berms, swales, and detention/retention ponds.*

**Staff response and findings of fact:**

The applicant's submitted landscape plan meets this criterion. All landscaping shall be installed prior to issuance of a Certificate of Occupancy. This criterion is met as conditioned.

2. Parking areas.

- a. *A minimum of 10 percent of the total surface of all parking areas as measured around the perimeter of parking spaces and maneuvering areas shall be landscaped. Such landscaping shall consist of trees and shrubs and/or ground cover plants that conform to the criteria in Section 14.32.300.E.1.a-h above. "Evenly distributed" means that the trees and other plants are distributed around the parking lot perimeter and between parking bays to provide a partial canopy.*

**Staff response and findings of fact:**

The applicant has proposed approximately 20% landscaping around the parking spaces and maneuvering areas. This criterion is met as proposed.

b. *Parking area landscaping shall consist of at minimum:*

- 1) *Trees: 1 tree for every 3,000 square feet of paved vehicular use area evenly distributed throughout site;*
- 2) *Landscaping between street and parking area within 50 feet of street: A landscape strip at least 7 feet in width is required between a street and parking area. It may be pierced by pedestrian and vehicular accessways. Strips shall be planted with low shrubs to form a continuous screen at least 30 inches high and maintained not to exceed 42 inches high or a masonry wall; and shall contain 1 canopy tree every 30 linear feet as measured along street lot line and living plant materials covering 75% of required landscape area within 3 years;*
- 3) *Perimeter parking area landscaping: All parking areas shall provide perimeter Landscape strip at least 7 feet in width along perimeter of parking lot. Must include 100% site obscuring 6 foot fence or wall against interior lot lines of residential districts, or 50% site obscuring 6 foot fence (chain link with slats and vegetation) against interior lot lines of adjoining commercial or industrial properties; and*
- 4) *Planting islands: Planting islands shall be provided at the ends of each parking row and at intervals within parking rows so that no parking stall is more than 45 feet from a planting island. Planting islands shall be at least 7 feet in width, as measured from the outside edge of a 6 inch wide curb, and a minimum area of 140 square feet. Each of these islands shall provide at least 1 canopy tree.*

**Staff response and findings of fact:**

The applicant has proposed approximately 14,000sqft of paved vehicular use area, which would require a minimum of 5 trees to be planted evenly throughout the site. The applicant is retaining one tree at the entrance to the parcel, and proposes to use the existing shared landscaping bay with the southern parcel, which contains four existing trees. The applicant also proposes two Flowering Cherry trees along the southern property line. Staff finds this to be sufficient.

The applicant has proposed a grass and stormwater detention facility along Getty Circle that is approximately 22ft wide, which meets the above criteria.

There is a proposed 7ft wide landscape strip on the south and southeastern portion of the subject parcel, and a proposed 10ft wide grass strip along the northern boundary. Given the fact that the property to the west is encumbered by mitigated wetlands and an easement that borders the subject property, the proposed width range of 6.9'-1.3' for the grass strip has been found acceptable.

Per Section 14.32.300(E)(2)(b)(3), the applicant is required to place a 50% site obscuring 6ft fence along the perimeter of the parking area against interior lot lines of adjoining industrial

properties. Because the southern property line abuts the parking area and it proposes the fire lane stubbed out to the south, staff does not find that a fence is required at this time.

The proposed placement of the planting islands do not adhere to the standards of 14.32.300(E)(2)(b)(4). While the sub 7ft grass strip on the western edge of the subject parcel was found acceptable above, it is located at the end of a parking row and is required to have a 6in wide curb. Given the circumstances of the abutting parcel, staff finds it acceptable to not require a curb located on the west side.

The planting island located to the west of the fire lane is approximately 5ft wide, and roughly 100sqft in area. The parking spaces labeled 1-5, and 6-10 are within 45ft of the southeastern landscape bay, and spaces 12-14 are within 45ft of the non-compliant landscape bay. Space 11 is not within the 45ft required spacing to either proposed planting island. Prior to issuance of Building Permits, the applicant will need to demonstrate compliance with Section 14.32.300(E)(2)(b)(4). This criterion is met as conditioned.

3. Buffering and Screening Required. *Buffering and screening are required under the following conditions:*
  - a. Parking/Maneuvering Area Adjacent to Streets and Drives. *Where a parking or maneuvering area is adjacent and parallel to a street or driveway, a 7 foot wide landscape strip shall be located parallel to the street to provide visual buffering. The 7 foot wide landscape strip shall include either an evergreen hedge; decorative wall (masonry or similar quality material) with openings; arcade, trellis, or similar partially opaque structure 3-4 feet in height. The required screening shall have breaks, where necessary, to allow pedestrian access to the site. The design of the wall or screening shall also provide breaks or openings for visual surveillance of the site and security. Evergreen hedges used to comply with this standard shall be a minimum of 36 inches in height at maturity, and shall be of such species, number, and spacing to provide the required screening within 1 year after planting. Any areas between the wall/hedge and the street/driveway line shall be landscaped with plants or other vegetative ground cover to provide 75% vegetative cover. All landscaping shall be irrigated.*
  - b. Parking/Maneuvering Area Adjacent to Building. *Where a parking or maneuvering area, or driveway, is adjacent to a building, the area shall be separated from the building by a curb and a raised walkway, plaza, or landscaped buffer not less than 5 feet in width. Raised curbs, bollards, wheel stops, or other design features shall be used to protect pedestrians, landscaping, and buildings from being damaged by vehicles. Where parking areas are located adjacent to residential ground-floor living space, a 4-foot wide landscape buffer with a curbed edge may fulfill this requirement.*
  - c. Screening of Mechanical Equipment, Outdoor Storage, Service and Delivery Areas, and Other Screening When Required. *All mechanical equipment, outdoor storage and manufacturing areas shall be screened from view from all public streets and adjacent Residential districts. Garbage areas and/or containers shall be screened on all sides*

regardless of their location on the property. When these or other areas are required to be screened, such screening shall be provided by:

- 1) A decorative wall (i.e., masonry or similar quality material),
- 2) An evergreen hedge,
- 3) An opaque fence complying with Section 14.32.500, or
- 4) A similar feature that provides an opaque barrier.

*Walls, fences, and hedges shall comply with the vision clearance requirements and provide for pedestrian circulation, in accordance with Chapter 14.31, Access and Circulation. (See Section 14.32.500 for standards specific to fences and walls.)*

- d. Flag Lot Screen. *In approving a flag lot, the City may require a landscape screen and/or fence be installed along property line(s) of the flag lot, for privacy of adjoining residents, in accordance with the provisions of Section 14.43.115. A flag lot screen shall not be required if the abutting property owner(s) indicate in writing that they do not want a screen or fence; however, the owner may install one at his or her discretion.*

**Staff response and findings of fact:**

There is not a proposed parking/maneuvering area adjacent to streets or driveways, nor the building. There are not any proposed mechanical equipment, outdoor storage, service and delivery areas, or external garbage. If, at the time of a new tenant, any of these items are proposed, the applicant shall adhere to these standards. This shall be a condition of approval. This criterion is met as conditioned.

- F. *Maintenance and Irrigation. Irrigation is required for all required commercial, industrial or multi-family landscape areas. The use of drought-tolerant plant species is encouraged. If the plantings fail to survive, the property owner shall replace them with an equivalent specimen (i.e., evergreen shrub replaces evergreen shrub, deciduous tree replaces deciduous tree, etc.). All man-made features required by this Code shall be maintained in good condition, or otherwise replaced by the owner. Backflow devices shall be required for all irrigation systems.*

**Staff response and findings of fact:**

The proposed project complies with the criterion. Water efficient irrigation is proposed for all landscaped areas. An approved backflow preventer will be installed as part of the system. Complete irrigation plans shall be submitted with the site development permit application. These maintenance requirements shall be conditions of approval. The property owner shall be responsible for the continued maintenance of all landscaping (grass, shrubs, plants and trees) for the duration of the development. Any plants, etc., that die must be replaced with like species immediately at the property owner's expense. The density of tree coverage shall remain or expand. This criterion is met as conditioned.

**14.32.400 Street Trees**

*Street trees shall be planted for all developments that are subject to Subdivision, Master Plan or Site Design Review. Requirements for street tree planting strips are provided in Section 3.4.100, Transportation Standards. Planting of street trees shall generally follow construction of curbs and sidewalks; however, the City may defer tree planting until final inspection of completed dwellings to avoid damage to trees during construction. The planting and maintenance of street trees shall conform to the following standards and guidelines and any applicable road authority requirements:*

- A. Growth Characteristics. Trees shall be selected based on climate zone, growth characteristics and site conditions, including available space, overhead clearance, soil conditions, exposure, and desired color and appearance. The following should guide tree selection by developers and approval by the City:*
- 1. Provide a broad canopy where shade is desired and over pedestrian walkways or parking areas, except where limited by available space or except in section 4.*
  - 2. Use low-growing trees for spaces under low utility wires.*
  - 3. Select trees that can be “limbed-up” to comply with vision clearance requirements.*
  - 4. Use narrow or “columnar” trees where awnings or other building features limit growth, or where greater visibility is desired between buildings and the street.*
  - 5. Use species with similar growth characteristics on the same block for design continuity.*
  - 6. Avoid using trees that are susceptible to insect damage and trees that produce excessive seeds or fruit.*
  - 7. Select trees that are well-adapted to the environment, including soil, wind, sun exposure, temperature tolerance, and exhaust. Drought-resistant trees should be chosen where they suit the specific soil type.*
  - 8. Select trees for their seasonal color if desired.*
  - 9. Use deciduous trees for summer shade and winter sun, unless unsuited to the location due to soil, wind, sun exposure, annual precipitation, or exhaust.*
  - 10. The diameter of the tree trunk at maturity shall not exceed the width and size of the planter strip or tree well.*
- B. Caliper Size. The minimum diameter or caliper size at planting, as measured 4 feet above grade, shall be 2 inches.*
- C. Spacing and Location. Street trees shall be planted within the street right-of-way within existing and proposed planting strips or in sidewalk tree wells on streets without planting strips, except when utility easements occupy these areas. Selected street tree species should be low maintenance and not interfere with public safety. Street tree spacing shall be based upon the type of tree(s) selected and the canopy size at maturity and, at a minimum, the planting area shall contain 16 square feet, or typically, 4 feet by 4 feet. In general, trees shall be spaced no more than 30 feet apart, except where planting a tree would conflict with existing trees, retaining walls, utilities and similar physical barriers. All street trees shall be placed outside utility easements. If preexisting utility easements prohibit street trees within the sidewalk, required trees may be located in the front yard setback or within other required landscape areas as approved by the approval body.*

- D. *Soil Preparation, Planting and Care.* The developer shall be responsible for planting street trees, including soil preparation, ground cover material, staking, and temporary irrigation for three years after planting. The developer shall also be responsible for tree care (pruning, watering, fertilization, and replacement as necessary) during the first three years after planting, after which the adjacent property owners shall maintain the trees.
- E. *Street Tree List.* See the following list for appropriate street trees. The developer may plant a tree species not included on this list when approved by the Community Development Director.

**Staff response and findings of fact:**

The applicant is not required to plant additional street trees, but shall replace trees damaged during construction should that occur, and shall be a condition of approval. This criterion is met as conditioned.

**14.32.500 Fences and Walls**

*Construction of fences and walls shall conform to all of the following requirements:*

- A. *General Requirements.* All fences and walls shall comply with the height limitations of the respective zoning district (Chapter 2) and the standards of this Section. The City may require installation of walls and/or fences as a condition of development approval, in accordance with land division approval (e.g., flag lots), approval of a conditional use permit, or site design review approval. If a fence is approved for greater than 6 feet in height, a building permit is also required. Any wall over 4 feet in height (measured from the bottom of the footing to the top of the wall) shall require a building permit and appropriate design from a licensed engineer. Fences must be located on private property. Fences and walls proposed on public right-of-way or public easements shall be subject to land use review approval.
- B. *Dimensions.*
1. *Except as provided under subsections 2 and 3, below, the height of fences and walls within a front yard setback shall not exceed 5 feet as measured from the grade closest to the street right-of-way.*
  2. *A retaining wall exceeding 4 feet in height within a front yard setback, which is necessary for site grading and development, may be approved through a land division or site development review.*
  3. *No fence or wall may exceed 7 feet in height. Exceptions to this standard may be approved through a variance, master planned development or site design review.*
  4. *One arbor, gate, or similar garden structures not exceeding 10 feet in height and 25 square feet in ground coverage, and has an entrance with a minimum clearance of 36 inches in width and 80 inches in height is allowed within each yard abutting a street, provided that it is not within a clear vision triangle.*
  5. *Walls and fences to be built for required buffers shall comply with Section 14.32.300.*
  6. *Fences, walls and hedges shall comply with the vision clearance standards of Section 14.31.200.*



C. *Maintenance. For safety and for compliance with the purpose of this Chapter, walls and fences required as a condition of development approval shall be maintained in good condition, or otherwise replaced by the property owner.*

D. *Materials.*

1. *Permitted fence and wall materials: wood; metal; bricks, stone; concrete block; stucco, or similar masonry; and non-prohibited evergreen plants.*
2. *Prohibited fence and wall materials: straw bales; barbed or razor wire; scrap lumber, scrap metal, or other scrap materials; hedges higher than 8 feet. Barbed wire on top of chain link or other fencing may only be approved on industrial, commercial or institutional use categories through a Class B Variance (Chapter 14.51.400).*
3. *Retaining walls constructed of brick or masonry exceeding 4 feet in height (as measured from bottom of footing to top coping) shall be subject to building permit review and approval by the City Building Official. Design of such walls shall be certified by a licensed architect or engineer.*

**Staff response and findings of fact:**

The applicant has not proposed any fences or walls with this proposal. If at any point a fence is proposed, these standards shall be met. This criterion is met as conditioned.

**Chapter 14.33 — Parking and Loading**

**14.33.200 Applicability**

*All developments subject to site design review (Chapter 14.42), including development of parking facilities, shall comply with the provisions of this Chapter.*

**14.33.300 Automobile Parking Standards**

- A. *Applicability. All development within the City of Cottage Grove shall comply with the provisions of this Chapter.*
- B. *Vehicle Parking - Minimum Standards by Use. The number of required off-street vehicle parking spaces shall be determined in accordance with the standards in Table 14.33.300.A, or alternatively, through a separate parking demand analysis prepared by the applicant and subject to a Type II Land Use Review (or Type III review if the request is part of an application that is already subject to Type III review). Where a use is not specifically listed in this table, parking requirements are determined by finding that a use is similar to one of those listed in terms of parking needs, or by estimating parking needs individually using the demand analysis option described above. Parking that counts toward the minimum requirement is parking in garages, carports, parking lots, bays along driveways, and shared parking. There is no minimum number of off-street parking spaces required in the Central Business District (or in designated downtown historic district); however, the “maximum parking” standards of this Chapter apply.*

**Staff response and findings of fact:**

The project must comply with the minimum parking requirement identified in Table 14.33.300A, which states the required minimum parking for Light and Medium / Heavy Manufacturing and Production is 1 space per 1,000sqft and one company vehicle space, which equates to 16 parking spaces. Given that the uses that will be utilizing this space are unknown at this time, the applicant has proposed 19 parking spaces and one van accessible ADA space, for a total of 20 spaces. Staff acknowledges that this amount of parking may limit the potential uses that this development can accommodate. This criterion is met as proposed.

- C. *Credit for On-Street Parking. The amount of off-street parking required may be reduced by one off-street parking space for every on-street parking space abutting a commercial or industrial development, up to 50 percent of the requirement. On-street parking shall follow the established or approved configuration of existing on-street parking, except that angled parking may be allowed for some streets, where permitted by City, ODOT and/or County standards. Parking credit can only be granted for developments with frontage on streets that allow parking on both sides.*

**Staff response and findings of fact:**

The applicant is not proposing to need parking off-site. This criterion is not applicable.

- D. *Vehicle Parking - Minimum Accessible Parking.*

1. *Accessible parking shall be provided for all uses in accordance the standards in Table 14.33.300B; parking spaces used to meet the standards in Table 14.33.300.B shall be counted toward meeting off-street parking requirements in Table 14.33.300.A;*
2. *Such parking shall be located in close proximity to building entrances and shall be designed to permit occupants of vehicles to reach the entrance on an unobstructed path or walkway. Accessible routes should be linked to required access aisles;*
3. *Accessible spaces shall be grouped in pairs where possible;*
4. *Where covered parking is provided, covered accessible spaces shall be provided in the same ratio as covered non-accessible spaces;*
5. *Required accessible parking spaces shall be identified with signs and pavement markings identifying them as reserved for persons with disabilities; signs shall be posted directly in front of the parking space at a height of no less than 42 inches and no more than 72 inches above pavement level. Van spaces shall be specifically identified as such.*

**Staff response and findings of fact:**

The proposed project includes one van accessible parking space, which shall be compliant with the signage and dimension standards in Table 14.33.300B and above, and shall be a condition of approval. This criterion is met as conditioned.

- E. *Off-site parking. Except for single-family or two-family dwellings, the vehicle parking spaces required by this Chapter may be located on another parcel of land, provided the parcel is within 400 feet of the use it serves, commercial parking is allowed in the underlying zone,*

*and the City has approved the off-site parking through Land Use Review. The distance from the parking area to the use shall be measured from the nearest parking space to a building entrance, following a sidewalk or other pedestrian route. The right to use the off-site parking must be evidenced by a recorded deed, lease, easement, or similar written instrument as approved by the Community Development Director. This binding agreement may restrict future changes to the property.*

**Staff response and findings of fact:**

No off-site parking on another parcel of land is proposed with this project. This criterion is not applicable.

*F. General Parking Standards.*

- 1. Location. Vehicle parking is allowed only on streets, within garages, carports, and other structures, or on driveways or parking lots that have been developed in conformance with this code. Chapter 2, Land Use Districts, prescribes parking location for some land uses (e.g., the requirement that parking for some multiple family and commercial developments be located to side or rear of buildings), and Chapter 3.1, Access and Circulation, provides design standards for driveways. Street parking spaces shall not include space in a vehicle travel lane (including emergency or fire access lanes), public right-of-way, pedestrian accessway, landscape, or other undesignated area. Required off-street parking shall not be located in the front or street side setback.*

**Staff response and findings of fact:**

The proposed development has the required parking located along the southern edge of the property. This criterion is met as proposed.

- 2. Mixed uses. If more than one type of land use occupies a single structure or parcel of land, the total requirements for off-street automobile parking shall be the sum of the requirements for all uses, unless it can be shown that the peak parking demands are actually less (i.e., the uses operate on different days or at different times of the day). The City may reduce the total parking required accordingly through Land Use Review.*

**Staff response and findings of fact:**

The proposed development has a sufficient amount of parking given the different potential uses. This criterion is met as proposed.

- 3. Shared parking. Required parking facilities for two or more uses, structures, or parcels of land may be satisfied by the same parking facilities used jointly, to the extent that the owners or operators show that the need for parking facilities does not materially overlap (e.g., uses primarily of a daytime versus nighttime nature; weekday uses versus weekend uses), and provided that the right of joint use is evidenced by a recorded deed, lease, contract, or similar written instrument establishing the joint use. The City may approve owner requests for shared parking through Land Use Review.*

**Staff response and findings of fact:**

The applicant does not have a determined use for tenants with the proposed development. With this application, the City acknowledges that there will be shared parking on this development with the different tenants. This criterion is met as proposed.

4. *Availability of facilities.* Owners of off-street parking facilities may post a sign indicating that all parking on the site is available only for residents, customers, and/or employees. Signs shall conform to the standards of Chapter 14.38.

**Staff response and findings of fact:**

The applicant may install a “tenants only” or some other signage making the parking exclusive to the development per Chapter 14.38. No other signage is proposed with this application. Any proposed signage must adhere to the standards of Chapter 14.38, and shall be a condition of approval. This criterion is met as conditioned.

5. *Lighting.* Parking areas shall have lighting to provide at least 2 foot-candles of illumination over parking spaces and walkways. Light standards shall be directed downward only and shielded to prevent lighting spillover into any adjacent residential district or use.

**Staff response and findings of fact:**

The applicant did not providing lighting details with the submittal of this land use application. Prior to issuance of building permits, the applicant shall submit plans that show adherence to these standards, and is a condition of approval. This criterion is met as conditioned.

6. *Screening of Parking Areas.* Parking spaces shall be located or screened so that headlights do not shine onto adjacent residential uses, per Section 14.32.300.E.

**Staff response and findings of fact:**

There are not any adjacent residential uses. This criterion is not applicable.

G. *Exceptions and Special Standards for Parking.*

1. *Exceptions for required parking.*

- a. *Seasonal outdoor seating where the seating area is less than 500 square feet is exempt from the required parking standards.*
- b. *The total number of required motor vehicle parking spaces for an industrial, commercial or office use may be reduced by 5 percent for each of the listed activities that are provided by the owners or operators, up to a maximum 15 percent reduction in the total number of motor vehicle spaces per development.*
  - 1) *Designating at least 10% of the employee motor vehicle parking spaces as carpool/vanpool parking and placing such spaces closer to the building than other employee parking;*

- 2) *Providing showers and lockers for employees who commute by bicycle;*
- 3) *Providing twice as many covered, secured bicycle parking racks or facilities as required by this ordinance;*
- 4) *Providing a transit facility (e.g. bus stop) that is approved by the local transit authority, with related amenities. Related amenities include, but are not limited to, a public plaza, pedestrian sitting areas, shelter and additional landscaping;*
- 5) *Other incentives provided in an approved Employee Transportation Demand Management (TDM) Plan.*

**Staff response and findings of fact:**

The applicant is not proposing a reduction in parking. This criterion is not applicable.

2. *Special Standards for Commercial Customer Parking. The motor vehicle parking areas shall be located and designed to facilitate safe and convenient pedestrian and bicycle movement to and from public sidewalks, streets or transit stops. Ways to achieve this standard may include, but are not limited to:*
  - a. *Front facades and primary entrances of all buildings are oriented to a public street or a private internal drive or street, to minimize pedestrian and bicycle travel through a parking area and to provide safe, convenient, and direct travel routes for pedestrians;*
  - b. *One or more raised walkways are provided through the parking areas, meeting federal American with Disabilities Act requirements, in order to provide safe, convenient, and direct travel routes for pedestrians through the parking areas;*
  - c. *Walkways abutting parking spaces or maneuvering areas are protected from vehicles through either landscaping buffers, minimum 3 feet wide on each side, or curbs on both sides;*
  - d. *Walkways across vehicle aisles are delineated with non-asphaltic material in a different color or texture than the parking areas;*
  - e. *On-site pedestrian walkways and bikeways connect to existing pedestrian and bicycle circulation systems that serve adjacent commercial uses or residential areas;*
  - f. *Internal drives or streets are designed to City standards for local streets in regard to pavement width, sidewalks and street trees. Sidewalks comply with ADA standards. Sidewalks 10-15 feet wide abutting front building facades are strongly encouraged. Internal vehicular circulation design for the site complies with City street connectivity standards, including maximum block length and perimeter.*
  - g. *Internal drives or streets connect to public streets abutting the site, unless physically precluded by pre-existing buildings.*
  - h. *Structures are located on the site to facilitate future infill and redevelopment of parking and landscape areas.*
  - i. *For shopping centers abutting one or more transit routes, one or more transit stops are located and designed with the approval when applicable of the local transit provider;*
  - j. *No drive-up, drive-in, or drive-through drives or lanes are located between a building and a public or private street.*

**Staff response and findings of fact:**

No commercial parking is proposed. This criterion is not applicable.

- H. *Maximum Number of Parking Spaces. The number of parking spaces provided by any particular use in ground surface parking lots shall not exceed the minimum number of spaces required for each use as provided by this Section by more than 50%. Spaces provided on-street, or within the building footprint of structures, such as in rooftop parking or under-structure parking, or in multi-level parking above or below surface lots, shall not apply toward the maximum number of allowable spaces. Parking spaces provided through “shared parking” also do not apply toward the maximum number.*

**Staff response and findings of fact:**

The minimum amount of parking required for this proposal is 16 spaces, which includes the required one van ADA space. The applicant proposes a total of 20 spaces, which is not more than 50% of the maximum amount of spaces allowed. This criterion is met as proposed.

- I. *Parking Stall Design and Minimum Dimensions. All off-street parking spaces shall be improved to conform to City standards for surfacing, stormwater management, and striping. Standard parking spaces shall conform to the following standards and the dimensions in Figures 14.33.300.F(1) through (3), and Table 14.33.300.F:*
- 1. Motor vehicle parking spaces shall measure minimum 9 feet wide by 18 feet long;*
  - 2. For large parking lots exceeding 10 stalls, alternate rows may be designated for compact cars provided that the compact stalls do not exceed 30% of the total required stalls. A compact stall shall measure minimum 8 feet in width and 15 feet in length and shall be signed for compact car use;*
  - 3. All parallel motor vehicle parking spaces shall measure 9 feet by 20 feet unless within a public right-of-way, when they shall measure a minimum of 7 to 8 feet by 20 feet;*
  - 4. Parking area layout shall conform to the dimensions in Figure 14.33.300.F(1) and (2), and Table 14.33.300F, below;*
  - 5. Public alley width may be included as part of dimension “D” in Figure 14.33.300.F(1), but all parking stalls must be on private property;*
  - 6. Parking areas shall conform to Federal Americans With Disabilities Act (ADA) standards for parking spaces (dimensions, van accessible parking spaces, etc.). Parking structure vertical clearance, van accessible parking spaces, should refer to Federal ADA guidelines; and*
  - 7. Bicycle parking shall be on a 2 feet by 6 feet minimum concrete pad per bike, or within a garage or patio of residential use.*

**Staff response and findings of fact:**

The applicant has proposed the parking spaces to be 9ft by 19ft. The applicant is not proposing compact spaces nor parallel parking spaces. The applicant did not detail the location of the required bicycle parking, which is addressed in the following section. Per Figure 14.33.300.F(1), the minimum clear aisle width for a 90 degree parking space is 24ft. The applicant has a 23 ft access and driveway, which widens into an approximately 25ft aisle

at the closest point between a parking space and the walkway along the southern edge of the building. This criterion is met as proposed.

#### **14.33.400 Bicycle Parking Requirements**

- A. *Applicability.* All uses that are subject to Site Design Review shall provide bicycle parking, in conformance with the standards in Table 14.33.400, and subsections A-H, below. This section does not apply to single-family, two-family, and three-family housing (detached, attached or manufactured housing), home occupations or other developments with fewer than 3 vehicle parking spaces.
- B. *Minimum Required Bicycle Parking Spaces.* A minimum of one bicycle parking space per use is required for all uses subject to Site Design Review. Table 14.33.400 lists additional standards that apply to specific types of development. Uses shall provide long- and short-term bicycle parking spaces, as designated in Table 14.33.400 and subsections C-J below. Where two options are provided (e.g., 2 spaces, or 1 per 20 units), the option resulting in more bicycle parking is used.

#### **Staff response and findings of fact:**

The applicant states in their narrative that “Two bicycle parking spaces are provided at the exterior of the building. Long term parking spaces will be at the interior of each rental space”, but did not provide additional documentation showing adherence to the standards of 14.33.400(C), which is found below. Given that the applicant does mention two bicycle parking spaces, this criterion is met as proposed.

- C. *Special Standards for the Central Business District.* Within the Central Business District zone, bicycle parking for customers shall be provided in the right-of-way along the street at a rate of at least one space per building. In addition, individual uses shall provide the required bicycle parking in front along the street, either on the sidewalks or in specially constructed areas such as pedestrian curb extensions. Several businesses may combine required parking into common bicycle parking structures if desired. Common bicycle parking shall not exceed 6 bicycle areas per parking structure.

#### **Staff response and findings of fact:**

The proposed project is not located in the Central Business District. This criterion is not applicable.

#### *D. Location and Design.*

1. Location. Bicycle parking should be no farther from the main building entrance than the distance to the closest vehicle space, or no more than 50 feet. Long-term (i.e., covered) bicycle parking should be incorporated whenever possible into building design. Short-term bicycle parking, when allowed within a public right-of-way, should be coordinated with the design of street furniture, as applicable. Street furniture includes benches, street lights, planters and other pedestrian amenities.
2. Pedestrian passage. The location of the rack and subsequent parking shall not interfere

*with pedestrian passage, leaving a clear area of at least 36 inches between bicycles and other existing and potential obstructions. Walkways from bicycle parking to the main entrance shall be hard surfaced and a minimum 4 feet in width.*

3. *Parking Space Dimensions. Bicycle parking spaces shall be at least 2 feet wide by 6 feet long and, when covered, provide a vertical clearance of 7 feet. An access aisle of at least 5 feet wide shall be provided and maintained beside or between each row of bicycle parking.*
4. *Design. Bicycle racks shall hold bicycles securely by means of the frame. The frame must be supported so that the bicycle cannot be pushed or fall to one side in a manner that will damage the wheels. Bicycle parking racks, shelters and lockers must be securely anchored to the ground or to the structure.*

**Staff response and findings of fact:**

The applicant did not submit plans that show adherence to these standards. As a condition of approval, prior to the issuance of building permits, the applicant shall submit plans showing compliance to these standards. This criterion is met as conditioned.

- E. *Visibility and Security. Bicycle parking for customers and visitors of a use shall be visible from street sidewalks or building entrances, so that it provides sufficient security from theft and damage.*

**Staff response and findings of fact:**

As conditioned above, the applicant shall provide plans showing compliance to this standard. This criterion is met as conditioned previously.

- F. *Options for Storage. Long-term bicycle parking requirements for multiple family uses and employee parking can be met by providing a bicycle storage room, bicycle lockers, racks, or other secure storage space inside or outside of the building.*

**Staff response and findings of fact:**

As conditioned above, the applicant shall provide plans showing compliance to this standard. This criterion is met as conditioned previously.

- G. *Lighting. For security, bicycle parking shall be at least as well-lit as vehicle parking.*

**Staff response and findings of fact:**

As conditioned above, the applicant shall provide plans showing compliance to this standard. This criterion is met as conditioned previously.

- H. *Reserved Areas. Areas set aside for bicycle parking shall be clearly marked and reserved for bicycle parking only.*

**Staff response and findings of fact:**

As conditioned above, the applicant shall provide plans showing compliance to this standard. This criterion is met as conditioned previously.



- I. *Hazards. Bicycle parking shall not impede or create a hazard to pedestrians. Parking areas shall be located so as to not conflict with vision clearance standards (Chapter 14.31, Access and Circulation).*

**Staff response and findings of fact:**

As conditioned above, the applicant shall provide plans showing compliance to this standard. This criterion is met as conditioned previously.

- J. *Multiple Uses. For buildings with multiple uses (such as a commercial or mixed use center), bicycle parking standards shall be calculated by using the total number of motor vehicle parking spaces required for the entire development. A minimum of one bicycle parking space for every 10 motor vehicle parking spaces is required.*

**Staff response and findings of fact:**

As conditioned above, the applicant shall provide plans showing compliance to this standard. This criterion is met as conditioned previously.

**14.33.500 Loading Areas**

- A. *Purpose. The purpose of this section of the Code is to provide standards (1) for a minimum number of off-street loading spaces that will ensure adequate loading areas for large uses and developments, and (2) to ensure that the appearance of loading areas is consistent with that of parking areas.*

- B. *Applicability. Section 14.33.400 applies to residential projects with 50 or more dwelling units, and non-residential and mixed-use buildings with 20,000 square feet or more total floor area.*

- C. *Number of Loading Spaces.*

1. *Residential buildings. Buildings where all of the floor area is in residential use shall meet the following standards:*

- a. *Fewer than 20 dwelling units on a site that abuts a local street: No loading spaces are required.*  
b. *All other buildings: One space.*

2. *Non-residential and mixed-use buildings. Buildings where any floor area is in non-residential uses shall meet the following standards:*

- a. *Less than 20,000 square feet total floor area: No loading spaces required.*  
b. *20,000 to 50,000 square feet of total floor area: One loading space.*  
c. *More than 50,000 square feet of total floor area: Two loading spaces.*

- D. *Size of Spaces. Required loading spaces shall be at least 35 feet long and 10 feet wide, and shall have a height clearance of at least 13 feet 6 inches.*

- E. *Placement, setbacks, and landscaping. Loading areas shall conform to the setback and perimeter landscaping standards in Chapters 2 and 3. Where parking areas are prohibited between a building and the street, loading areas are also prohibited. The decision body may approve a loading area adjacent to or within the street right-of-way through Site Design Review or Conditional Use Permit review, as applicable, where it finds that loading and unloading operations are short in duration (i.e., less than 1 hour), not obstruct traffic during peak traffic hours, or interfere with emergency response services*

**Staff response and findings of fact:**

The proposed development is less than 20,000sqft. Section 14.33.500 does not apply. This criterion is not applicable.

**Chapter 14.34 — Public Facilities**

**14.34.010 Purpose and Applicability**

- A. *Purpose. The purpose of this Chapter is to provide planning and design standards for public and private transportation facilities and utilities. Streets are the most common public spaces, touching virtually every parcel of land. Therefore, one of the primary purposes of this Chapter is to provide standards for attractive and safe streets that can accommodate vehicle traffic from planned growth and provide a range of transportation options, including options for driving, walking, bus transit, and bicycling. This Chapter is also intended to implement the City's Transportation System Plan.*
- B. *When Standards Apply. Unless otherwise provided, the standard specifications for construction, reconstruction, or repair of transportation facilities, utilities, and other public improvements within the City shall occur in accordance with the standards of this Chapter. No development may occur unless the public facilities related to development comply with the public facility requirements established in this Chapter.*

**Staff response and findings of fact:**

The public facilities related to the development are required to be constructed in accordance with this chapter or the governing agencies. City Planner Eric Mongan has provided comments related to Public Facility development. These comments shall be considered conditions of approval. This criterion is met as conditioned.

- C. *Engineering Design Criteria, Standard Specifications and Details. The Oregon Standard Specifications for Construction with Appendix shall be a part of the City's adopted installation standard(s); other standards may also be required upon recommendation of the City Engineer. The design criteria, standard construction specifications and details maintained by the City Engineer, or any other road authority with jurisdiction, shall supplement the general design standards of this Development Code. The City's specifications, standards, and details are hereby incorporated into this code by reference.*

**Staff response and findings of fact:**

As conditioned above, the engineering comments detail the standards. This criterion is met as previously conditioned.

- D. Conditions of Development Approval. No development may occur unless required public facilities are in place or guaranteed, in conformance with the provisions of this Code. Improvements required as a condition of development approval, when not voluntarily accepted by the applicant, shall be roughly proportional to the impact of the development on public facilities. Findings in the development approval shall indicate how the required improvements are directly related and roughly proportional to the impact.*

**Staff response and findings of fact:**

Conditions of approval that apply to this proposal have been identified by the City Engineer and detailed in the applicable sections of this staff report (see Exhibit A). This criterion is met as previously conditioned.

**14.34.100 Transportation Standards**

- A. Development Standards. The following standards shall be met for all new uses and developments:*
- 1. All new lots created, consolidated, or modified through a land division, partition, lot line adjustment, lot consolidation, or street vacation must have frontage or approved access to a public street;*
  - 2. Streets within or adjacent to a development shall be improved in accordance with the Transportation System Plan and the provisions of this Chapter;*
  - 3. Development of new streets, and additional street width or improvements planned as a portion of an existing street, shall be improved in accordance with this Section, and public streets shall be dedicated to the applicable road authority; and*
  - 4. New streets, alleys and drives shall be paved.*

**Staff response and findings of fact:**

The project is a new development. The drive shall be paved. This criterion is met as proposed.

- B. Guarantee. The City may accept a future improvement guarantee (e.g., owner agrees not to object to the formation of a local improvement district in the future) in lieu of street improvements if one or more of the following conditions exist:*
- 1. A partial improvement may create a potential safety hazard to motorists or pedestrians;*
  - 2. Due to the developed condition of adjacent properties it is unlikely that street improvements would be extended in the foreseeable future and the improvement associated with the project under review does not, by itself, provide increased street safety or capacity, or improved pedestrian circulation;*
  - 3. The improvement would be in conflict with an adopted capital improvement plan; or*

4. *The improvement is associated with an approved land partition in the R-1 or R-2 District and the proposed land partition does not create any new streets.*
- C. *Creation of Rights-of-Way for Streets and Related Purposes. Streets shall be created through the approval and recording of a final subdivision or partition plat; except the City may approve the creation of a street by acceptance of a deed, provided that the street is deemed in the public interest by the City Council for the purpose of implementing the Transportation System Plan, and the deeded right-of-way conforms to the standards of this Code.*
  - D. *Creation of Access Easements. The City may approve an access easement when the easement is necessary to provide for access and circulation in conformance with Chapter 14.31, Access and Circulation. Access easements shall be created and maintained in accordance with the Uniform Fire Code Section 10.207.*
  - E. *Street Location, Width, and Grade. Except as noted below, the location, width and grade of all streets shall conform to the Transportation System Plan and an approved street plan or subdivision plat. Street location, width, and grade shall be determined in relation to existing and planned streets, topographic conditions, public convenience and safety, and in appropriate relation to the proposed use of the land to be served by such streets:*
  - F. *Minimum Rights-of-Way and Street Sections. Street rights-of-way and improvements shall be the widths in Table 14.34.100. A variance or Master Plan approval shall be required to vary the standards in Table 14.34.100. Where a range of width is indicated, the width shall be the narrower in the range unless unique and specific conditions exists as determined by the decision-making authority based upon the following factors:*
    1. *Street classification in the Transportation System Plan;*
    2. *Anticipated traffic generation;*
    3. *On-street parking needs;*
    4. *Sidewalk and bikeway requirements based on anticipated level of use;*
    5. *Requirements for placement of utilities;*
    6. *Street lighting;*
    7. *Minimize drainage, slope, and sensitive lands impacts, as identified by Chapter 14.37;*
    8. *Street tree location, as provided for in Chapter 14.32;*
    9. *Protection of significant vegetation, as provided for in Chapter 14.32;*
    10. *Safety and comfort for motorists, bicyclists, and pedestrians;*
    11. *Street furnishings (e.g., benches, lighting, bus shelters, etc.), when provided;*
    12. *Access needs for emergency vehicles; and*
    13. *Transition between different street widths (i.e., existing streets and new streets).*
  - G. *Subdivision Street Connectivity. All subdivisions shall conform to all the following access and circulation design standards, as applicable:*
  - H. *Traffic Signals and Traffic Calming Features.*

1. *Traffic signals shall be required with development when traffic signal warrants are met, in conformance with the Highway Capacity Manual and Manual of Uniform Traffic Control Devices. The location of traffic signals shall be noted on approved street plans. Where a proposed street intersection will result in an immediate need for a traffic signal, a signal meeting approved specifications shall be installed in conformance with the road authority's requirements. The developer's cost and the timing of improvements shall be included as a condition of development approval.*
2. *When an intersection meets or is projected to meet traffic signal warrants, the City may accept alternative mitigation, such as a roundabout, in lieu of a traffic signal, if approved by the City Engineer and applicable road authority.*
3. *The City may require the installation of calming features such as traffic circles, curb extensions, reduced street width (parking on one side), medians with pedestrian crossing refuges, and/or special paving to slow traffic in neighborhoods or commercial areas with high pedestrian traffic.*

*I. Future Street Plan and Extension of Streets.*

1. *A future street plan shall be filed by the applicant in conjunction with an application for a subdivision in order to facilitate orderly development of the street system. The plan shall show the pattern of existing and proposed future streets from the boundaries of the proposed land division and shall include other divisible parcels within 600 feet surrounding and adjacent to the proposed land division. The street plan is not binding; rather it is intended to show potential future street extensions with future development*
2. *Streets shall be extended to the boundary lines of the parcel or tract to be developed when the City determines that the extension is necessary to give street access to, or permit a satisfactory future division of, adjoining land. The point where the streets temporarily end shall conform to a-c, below:*

*J. Street Alignment, Radii, and Connections.*

1. *Staggering of streets making "T" intersections at collectors and arterials shall be designed so that offsets of more than 300 feet on such streets are created, as measured from the centerline of the street.*
2. *Spacing between local street intersections shall have a minimum separation of 200 feet, except where more closely spaced intersections are designed to provide an open space, pocket park, common area, or similar neighborhood amenity. This standard applies to four-way and three-way (off-set) intersections.*
3. *All local and collector streets that stub into a development site shall be extended within the site to provide through circulation unless prevented by environmental or topographical constraints, existing development patterns, or compliance with other standards in this code. The applicant must show why the environmental or topographic constraint precludes some reasonable street connection.*
4. *Proposed streets or street extensions shall be located to allow continuity in street alignments and to facilitate future development of vacant or re-developable lands.*

5. *In order to promote efficient vehicular and pedestrian circulation throughout the city, the design of subdivisions and alignment of new streets shall conform to block length standards in Section 14.31.200.*
6. *Corner curb radii shall be 20 feet -30 feet based on street classification, except where smaller radii are approved by the City Engineer.*

**Staff response and findings of fact:**

Criterion from Sections 14.34.100 (B) – (J) are not applicable to the proposal.

- K. *Sidewalks, Planter Strips, Bicycle Lanes. Sidewalks, planter strips, and bicycle lanes shall be installed in conformance with the standards in Table 14.34.100F, applicable provisions of Transportation System Plan, the Comprehensive Plan, and adopted street plans. Maintenance of sidewalks and planter strips in the right-of-way is the continuing obligation of the adjacent property owner.*

**Staff response and findings of fact:**

No new right-of-way sidewalks are proposed. Maintenance of this shall be the continuing obligation of the adjacent property owner. This criterion is met as proposed.

- L. *Intersection Angles. Streets shall be laid out so as to intersect at an angle as near to a right angle as practicable, except where topography requires a lesser angle or where a reduced angle is necessary to provide an open space, pocket park, common area or similar neighborhood amenity. In addition, the following standards shall apply:*

**Staff response and findings of fact:**

No streets are proposed. This criterion is not applicable.

- M. *Existing Rights-of-Way. Whenever existing rights-of-way adjacent to a proposed development are less than standard width, additional rights-of-way shall be provided at the time of subdivision or development, subject to the provision of Section 14.34.100.*

**Staff response and findings of fact:**

Getty Circle is classified as a local street in the 2015 TSP, and was constructed to required standards. This criterion is not applicable.

- N. *Cul-de-sacs. A cul-de-sac street shall only be used when environmental or topographical constraints, existing development patterns, or compliance with other standards in this code preclude street extension and through circulation.*

**Staff response and findings of fact:**

The proposed development is at the end of a cul-de-sac, and no additional cul-de-sacs are proposed. This criterion is not applicable.

- O. *Grades and Curves. Grades shall not exceed 6% on arterials, 10% on collector streets, or 15% on any other street (except that local or residential access streets may have segments with grades which exceed 15% for distances of no greater than 100 feet), and:*

1. *Centerline curve radii shall not be less than 300 feet on arterials, 200 feet on major collectors, or 100 feet on other streets; and*
2. *Streets intersecting with a minor collector or greater functional classification street, or streets intended to be posted with a stop sign or signalization, shall provide a landing averaging five percent or less. Landings are that portion of the street within 20 feet of the edge of the intersecting street at full improvement.*

**Staff response and findings of fact:**

No new streets are proposed for this development site. This criterion is not applicable.

- P. Curbs, Curb Cuts, Ramps, and Driveway Approaches. Concrete curbs, curb cuts, wheelchair ramps, bicycle ramps, and driveway approaches shall be constructed in accordance with standards specified in Chapter 14.31, Access and Circulation.*

**Staff response and findings of fact:**

The driveway approach is proposed to access Getty Circle. See the Engineering comments (Exhibit A) for the appropriate standard detail. This criterion is met as previously conditioned.

- Q. Streets Adjacent to Railroad Right-of-Way. When a transportation improvement is proposed within 300 feet of a public railroad crossing, or a modification is proposed to an existing public crossing, the Oregon Department of Transportation and the rail service provider shall be notified and given an opportunity to comment, in conformance with the provisions of Chapter 4. Private crossing improvements are subject to review and licensing by the rail service provider.*

**Staff response and findings of fact:**

No transportation improvements are proposed within 300 feet of a public railroad crossing. This criterion is not applicable.

- R. Alleys, Public or Private. Alleys shall conform to the standards in Table 14.34.100. Alley intersections and sharp changes in alignment shall be avoided. The corners of necessary alley intersections shall have a radius of not less than 12 feet.*

**Staff response and findings of fact:**

No alleys are proposed with this project. This criterion is not applicable.

- S. Private Streets. Private streets shall conform to City standards of construction and Table 14.34.100.F and shall provide sidewalks or pathways as approved by the City. Private streets shall not be used to avoid public access connectivity required by this Chapter. Gated communities (i.e., where a gate limits access to a development from a public street) are prohibited; and*

**Staff response and findings of fact:**

There are no private streets proposed. This criterion is not applicable.

T. *Street Names. No new street name shall be used which will duplicate or be confused with the names of existing streets in Lane County. Street names, signs, and numbers shall conform to the standards in Chapter 12.16 of the Cottage Grove Municipal Code, except as requested by emergency service providers.*

**Staff response and findings of fact:**

No new streets are proposed with this project. This criterion is not applicable.

U. *Survey Monuments. Upon completion of a street improvement and prior to acceptance by the City, it shall be the responsibility of the developer's registered professional land surveyor to provide certification to the City that all boundary and interior monuments shall be reestablished and protected.*

**Staff response and findings of fact:**

No new streets are proposed. This criterion is not applicable.

V. *Street Signs. The city, county, or state with jurisdiction shall install all signs for traffic control and street names. The cost of signs required for new development shall be the responsibility of the developer. Street name signs shall be installed at all street intersections. Stop signs and other signs may be required.*

**Staff response and findings of fact:**

No new streets are proposed. This criterion is not applicable.

W. *Mail Boxes. Plans for mail boxes shall be approved by the United States Postal Service.*

**Staff response and findings of fact:**

New mailboxes will be required to meet the approval of the United States Postal Service, and shall be a condition of approval. Please contact the Cottage Grove Post Office for more information. This criterion is met as proposed.

X. *Street Light Standards. Street lights shall be installed in accordance with City standards.*

**Staff response and findings of fact:**

There are not any proposed street lights. This criterion is not applicable at this time.

Y. *Street Cross Sections. Street cross sections shall be constructed to Engineering Department Standards.*

**Staff response and findings of fact:**

New streets are not proposed with this project. This criterion is not applicable.

**14.34.200 Public Use Areas**

A. *Dedication of Public Use Areas.*



1. *Where a proposed park, playground, or other public use shown in a plan adopted by the City is located in whole or in part in a subdivision, the City may require the dedication or reservation of this area on the final plat for the subdivision, provided that the impact of the development on the City park system is roughly proportionate to the dedication or reservation being made.*
  2. *The City may purchase or accept voluntary dedication or reservation of areas within the subdivision that are suitable for the development of parks and other public uses; however, the City is under no obligation to accept such areas offered for dedication or sale.*
- B. System Development Charge Credit. Dedication of land to the City for public use areas, voluntary or otherwise, shall be eligible as a credit toward any required system development charge for parks.*

**Staff response and findings of fact:**

Dedication of public use areas are not proposed and System Development Charge Credits are not requested. This criterion is not applicable.

**14.34.300 Sanitary Sewer and Water Service Improvements**

- A. Sewers and Water Mains Required. Sanitary sewers and water mains shall be installed to serve each new development and to connect developments to existing mains in accordance with the City's Sanitary Sewer Master Plan, Water System Master Plan, and the applicable construction specifications. When streets are required to be stubbed to the edge of the subdivision, sewer and water system improvements shall also be stubbed with the streets, except as may be waived by the City Engineer.*
- B. Sewer and Water Plan Approval. Development permits for sewer and water improvements shall not be issued until the City Engineer has approved all sanitary sewer and water plans in conformance with City standards.*
- C. Over-Sizing. The City may require as a condition of development approval that sewer, water, and/or storm drainage systems serving new development be sized to accommodate future development within the area as projected by the applicable Water, Sewer, and/or Storm Drainage Master Plan, provided that the city may grant the developer credit toward any required system development charge for the same.*
- D. Inadequate Facilities. Development permits may be restricted by the City where a deficiency exists in the existing water or sewer system that cannot be rectified by the development and which if not rectified will result in a threat to public health or safety, surcharging of existing mains, or violations of state or federal standards pertaining to operation of domestic water and sewerage treatment systems.*

**Staff response and findings of fact:**

The City Planner provided Engineering comments (Exhibit A), which are considered conditions of approval. This criterion is met as previously conditioned.

### General

- Development of the property will require that all cable utilities be placed underground including telephone, television and power. This requirement is inclusive of any connections to the feeder main. Separate permits from the individual private utilities will be required. Private utilities designs will be required prior to construction.
- Subdivision Plan shows Lot 7 is 0.98 acres. A City of Cottage Grove Erosion Prevention Permit Erosion control measures should be installed and approved prior to resuming construction.
- Traffic control shall be in accordance of the Manual of Uniform Traffic Control Devices for all work performed in the public right-of-way.
- Developer will be responsible for payment of all system development charges and design review and other associated fees.
- The City of Cottage Grove requires a minimum of five feet horizontal separation from its utilities and all other utilities. This distance is measured from outside of pipe to outside of pipe. Other utility companies may have stricter standards than this. The standard with the greatest separation will apply.

### Streets

- Erosion control measures shall be maintained and operational throughout construction.
- Site has access off Getty Circle. Proposed plans show a new driveway approach off Getty Circle. The driveway approach shall follow City Standard Detail No. 215. Contact the Engineering department for details.
- Sidewalk exists along Getty Circle. Any damage to sidewalk during construction, will result in replacement of a sidewalk panel. Any replacement work shall meet City Standards. Contact Engineering department for details.
- Any new utility work, repair of any utility work, connection to any utility within Getty Circle or street patching in those two streets shall conform to the City of Cottage Grove Standard Drawing No. 602. Contact Engineering Department for details

### Water

- A 6-inch water line is stubbed into Lot 7 with a 2 inch blow off assembly according to the Industrial Park Plans. The line is located approximately 4.5 feet north of the southern property line.
- A fire hydrant is located near the southeast corner of Lot 7.
- Upon payment of fee, the City of Cottage Public Works crew will tap and set water meters. The crew tries to schedule installation within 10 business day. Crew will provide a stub out of the back side of the meter so private plumber can install backflow devices and install the remaining portion of the water service.

- Water meter(s) shall be placed in the sidewalk. The meter shall be placed in a manner that they will not be covered up with parked vehicles, personal property, and/or trash cans.
- All new development is required to install a backflow device on the customer side of each water meter. This requirement can be deferred until the building permit process. Contact Utility Maintenance Supervisor for details.
- The Oregon Administrative Rules requires a 10-foot horizontal separation between water lines and sanitary sewer lines include water and sewer services within the public right of way.
- Building permit plans shall show irrigation lines, number of sprinkler heads and irrigation zones as well as any irrigation meter on the building permit plans to properly size the irrigation meter.
- Show water fixtures for each unit on the building plans so staff can check meter size for each unit as outlined in the plumbing code. Please include any hose bibbs on the building permit plans
- Developers are is responsible for the costs and the construction of the water services on private property from the back side of the water meter to the building or units.

#### Sanitary Sewer

- A 6-inch sanitary sewer line is stubbed onto the site. The sanitary sewer service line is located approximately 5 feet south of the north property line according to Industrial Park Plans.
- The City requires a cleanout at property line. See City of Cottage Grove Standard Detail No. 304. Contact Engineering Department for details.
- New sanitary sewer services shall be constructed to City standards for the proposed lots. Pipe standards for sanitary sewer service laterals shall be D3034 PVC pipe and a sanitary sewer cleanout for each lateral is required at the property line. See Engineering Department for details.
- Developers are is responsible for the costs and the construction of the sewer services on private property.

#### **14.34.400 Storm Drainage Improvements**

- A. General Provisions. The City shall issue a development permit only where adequate provisions for storm water and flood water runoff have been made in conformance with the City's Storm Drainage Master Plan and Chapter 14.35, Surface Water Management.*
- B. Accommodation of Upstream Drainage. Culverts and other drainage facilities shall be large enough to accommodate existing and potential future runoff from the entire upstream drainage area, whether inside or outside the development. Such facilities shall be subject to review and approval by the City Engineer.*
- C. Effect on Downstream Drainage. Where it is anticipated by the City Engineer that the additional runoff resulting from the development will overload an existing drainage facility, the City shall withhold approval of the development until provisions have been made for*

*improvement of the potential condition or until provisions have been made for storage of additional runoff caused by the development in accordance with City standards.*

- D. *Over-Sizing. The City may require as a condition of development approval that sewer, water, and/or storm drainage systems serving new development be sized to accommodate future development within the area as projected by the applicable Water, Sewer, and/or Storm Drainage Master Plan, provided that the city may grant the developer credit toward any required system development charge for the same.*
- E. *Existing Watercourse. Where a proposed development is traversed by a watercourse, drainage way, channel, or stream, there shall be provided a storm water easement or drainage right-of-way conforming substantially with the lines of such watercourse and such further width as will be adequate for conveyance and maintenance to protect the public health and safety.*

**Staff response and findings of fact:**

The proposed project complies with these criteria. The City Engineer has provided the following comments, which will be considered conditions of approval in regards to storm drainage:

**Storm Drainage**

- A 10-inch PVC storm drainage main in stub into Lot 7. Plans show this line is approximately 10 feet south of the north property line.
- Storm water runoff is not to adversely affect adjacent property owners; therefore no overland flow is allowed. All storm water runoff from this development shall be contained on the property prior to connecting the public storm drainage system. Building plans should include spot elevations or enough detail to show staff that all storm water runoff from site is captured on site before entering the public storm drainage system, especially from back of driveway approach. This may include a trench drain at the back of driveway approach.
- If any new on-site catch basins on site shall meet the standards as outlined by the Uniform Plumbing Code.
- On-site stormwater detention and treatment shall be install per approved plans.

**14.34.500 Utilities**

*A. Underground Utilities.*

1. *Generally. All new utility lines including, but not limited to, those required for electric, communication, lighting, and cable television services and related facilities shall be placed underground, except for surface mounted transformers, surface mounted connection boxes and meter cabinets which may be placed above ground, temporary utility service facilities during construction, and high capacity electric lines operating at 50,000 volts or above.*

**Staff response and findings of fact:**

Development of the property will require that all dry utilities be placed underground including telephone, television and power. This requirement is inclusive of any connections to the feeder main. Separate permits from the individual private utilities will be required. Private utilities designs will be required prior to construction. (See Engineering Comments.) This criterion is met as conditioned.

2. *Subdivisions. The following additional standards apply to all new subdivisions, in order to facilitate underground placement of utilities:*
  - a. *The developer shall make all necessary arrangements with the serving utility to provide the underground services. Care shall be taken to ensure that all above ground equipment does not obstruct vision clearance areas for vehicular traffic (Chapter 14.31);*
  - b. *The City reserves the right to approve the location of all surface-mounted facilities;*
  - c. *All underground utilities, including sanitary sewers and storm drains installed in streets by the developer, shall be constructed prior to the surfacing of the streets; and*
  - d. *Stubs for service connections shall be long enough to avoid disturbing the street improvements when service connections are made.*

**Staff response and findings of fact:**

The project is not a subdivision. This criterion is not applicable.

- B. *Exception to Undergrounding Requirement. An exception to the undergrounding requirement may be granted due to physical constraints, such as steep topography, sensitive lands (Chapter 14.37), or existing development conditions.*

**Staff response and findings of fact:**

An exception to the undergrounding requirement is not requested. This criterion is not applicable.

**14.34.600 Easements**

- A. *Provision. The developer or applicant shall make arrangements with the City, the applicable district, and each utility franchise for the provision and dedication of utility easements necessary to provide full services to the development. The City's standard width for public main line utility easements shall be determined by the City Engineer.*
- B. *Recordation. As determined by the City Engineer, all easements for sewers, storm drainage and water quality facilities, water mains, electric lines, or other public utilities shall be recorded with the final plat. See Chapter 14.42, Site Design Review, and Chapter 14.43, Land Divisions.*

**Staff response and findings of fact:**

*There are no easements proposed or required for this proposal. This criterion is not applicable.*

#### **14.34.700 Construction Plan Approval and Assurances**

- A. Plan Approval and Permit. No public improvements, including sanitary sewers, storm sewers, streets, sidewalks, curbs, lighting, parks, or other requirements shall be undertaken except after the plans have been approved by the City, permit fee paid, and permit issued. The permit fee is required to defray the cost and expenses incurred by the City for construction and other services in connection with the improvement. The permit fee shall be set by City Council.*
- B. Performance Guarantee. The City may require the developer or subdivider to provide bonding or other performance guarantees to ensure completion of required public improvements. See Section 14.42.400, Site Design Review, and Section 14.43.180, Land Divisions.*

**Staff response and findings of fact:**

There are no public improvements proposed in this application. This criterion is not applicable.

#### **14.34.800 Installation**

- A. Conformance Required. Improvements installed by the developer either as a requirement of these regulations or at his/her own option, shall conform to the requirements of this Chapter, approved construction plans, and to improvement standards and specifications adopted by the City.*
- B. Adopted Installation Standards. The Standard Specifications for Public Works Construction, Oregon Chapter A.P.W.A., shall be a part of the City's adopted installation standard(s); other standards may also be required upon recommendation of the City Engineer.*
- C. Commencement. Work shall not begin until the City has been notified in advance in writing.*
- D. Resumption. If work is discontinued for more than one month, it shall not be resumed until the City is notified in writing.*
- E. City Inspection. Improvements shall be constructed under the inspection and to the satisfaction of the City. The City may require minor changes in typical sections and details if unusual conditions arising during construction warrant such changes in the public interest. Modifications to the approved design requested by the developer may be subject to review under Chapter 14.46, Modifications to Approved Plans and Conditions of Approval. Any monuments that are disturbed before all improvements are completed by the subdivider shall be replaced prior to final acceptance of the improvements.*
- F. Engineer's Certification and As-Built Plans. A registered civil engineer shall provide written certification in a form required by the City that all improvements, workmanship, and materials are in accord with current and standard engineering and construction practices, conform to approved plans and conditions of approval, and are of high grade, prior to City*

*acceptance of the public improvements, or any portion thereof, for operation and maintenance. The developer's engineer shall also provide 2 sets of "as-built" plans, in conformance with the City Engineer's specifications, for permanent filing with the City.*

**Staff response and findings of fact:**

Any new utility work or repair of utility work or connection to any utility within the City right-of-way shall conform to the appropriate City of Cottage Grove details. See Engineering Comments. This criterion is met as previously conditioned.

**Chapter 14.35 — Surface Water Management**

**Staff response and findings of fact:**

The driveway apron will be constructed with concrete/asphaltic concrete and designed to conform with the City's engineering design criteria. This criterion is met as proposed.

**The proposed system includes piping of all downspouts with on-site private catches and connected to the City storm sewer system. Per engineering comments, the following conditions of approval apply to surface water management on this site.**

- A 12-inch PVC storm drainage main in stub into Lot 4. Plans show this line is approximately 7.5 feet west of the northeast property corner of Lot 4.
- Storm water runoff is not to adversely affect adjacent property owners; therefore no overland flow is allowed. All storm water runoff from this development shall be contained on the property prior to connecting the public storm drainage system. Building plans should include spot elevations or enough detail to show staff that all storm water runoff from site is captured on site before entering the public storm drainage system, especially from back of driveway approach. This may include a trench drain at the back of driveway approach.
- If any new on-site catch basins on site shall meet the standards as outlined by the Uniform Plumbing Code.
- Hydraulic calculations shall be supplied at the time of building permit submittal to support that existing on-site pipes are large enough to handle existing hard surface areas as well as the proposed hard surface area. The design occasion shall be a 10-year storm with 60-minute duration. Calculations shall be submitted at the time of building application. A Professional Engineer registered in State of Oregon shall perform hydraulic calculations.

(See Engineering Comments, Exhibit A.)

**Chapter 14.37 — Sensitive Lands**

**14.37.010 Purpose and Applicability.** The following sections contain design standards related to areas of environmental concern within the City of Cottage Grove. These standards are applicable to any development subject to Land Use or Site Design Review on hillsides, in designated floodplains, along river corridors, or within the state-designated Willamette River Greenway.

**Staff response and findings of fact:**

The proposed development is not located on any sensitive lands. This criterion is not applicable.

## CONCLUSION

Site Design Review **approval** pursuant to Section 14.42.600 Site Design Review Approval Criteria and subject to the recommended conditions is supported by the findings of fact that establish compliance with the applicable state and local standards.

## STAFF RECOMMENDATION

That the Site Design Review SDR 2-24 be **approved** for the rental shops building on Lot #7 of the Cottage Grove Industrial Park pursuant to Section 14.42.600 Site Design Review Approval Criteria which are supported by findings of fact and conditions that can establish compliance with applicable state and local standards.

## CONDITIONS OF APPROVAL

1. Major modifications to these plans shall be approved by the Planning Commission.
2. When a new business moves into the rental spaces, a Change of Use Type I application shall be required to ensure conformity to the standards of 14.24.110, and if applicable, the Type III Conditional Use application.
3. An access permit for this entrance shall be processed at time of Land Use Review.
4. The applicant shall stripe the fire turnaround and no parking shall be allowed within this space.
5. A 20' vision clearance triangle shall be maintained at the driveway with no obstruction between 2.5' – 8' in height.
6. The driveway apron shall be designed to conform with the City's Engineering design criteria.
7. The crosswalk that connects the parking spaces with the proposed building must be clearly delineated.
8. Sidewalks and handicap facilities must meet the current American Disabilities Act (ADA) Standards.
9. The applicant shall avoid causing any damage to the existing trees not indicated on the site plan to be removed. If a tree that is proposed to be retained is damaged or destroyed during the construction process, including street trees, the applicant shall replace the tree.
10. The applicant has proposed numerous 3 gal plants; prior to issuance of building permits, an updated landscaping plan shall show compliance to the 5 gal minimum requirement, per Section 14.32.300(D)(7).
11. All landscaping shall be irrigated and installed prior to issuance of a Certificate of Occupancy. The property owner shall be responsible for the continued maintenance of all landscaping (grass, shrubs, plants and trees) for the duration of the development. Any plants, etc., that die must be replaced with like species immediately at the property owner's expense. The density of tree coverage shall remain or expand.
12. The planting island located to the west of the fire lane is approximately 5ft wide, and roughly 100sqft in area. The parking spaces labeled 1-5, and 6-10 are within 45ft of the



southeastern landscape bay, and spaces 12-14 are within 45ft of the non-compliant landscape bay. Space 11 is not within the 45ft required spacing to either proposed planting island. Prior to issuance of Building Permits, the applicant will need to demonstrate compliance with Section 14.32.300(E)(2)(b)(4).

13. There are not any proposed mechanical equipment, outdoor storage, service and delivery areas, or external garbage. If, at the time of a new tenant, any of these items are proposed, the applicant shall adhere to the standards of Section 14.32.300(E)(3)(c).
14. No fences or walls are proposed with this application. If a fence or wall is proposed, the standards of Section 14.32.500 shall be adhered to.
15. A minimum of 16 parking spaces is required, that are sized at least 9ft by 18ft.
16. One van accessible parking space is proposed, and shall be compliant with ADA required signage and dimensions.
17. No signage is proposed with this application. Any proposed signage must adhere to the standards of Chapter 14.38.
18. Prior to issuance of building permits, the applicant shall submit plans that show adherence to the parking lot lighting standards of Section 14.33.300(F)(5).
19. Prior to issuance of building permits, the applicant shall submit a site plan detailing where the required long and short term bicycle parking spaces shall be located. These spaces shall conform to the standards in Section 14.33.400.
20. New mailboxes shall meet United States Postal Service standards.
21. Development of the property will require that all dry utilities be placed underground including telephone, television and power. This requirement is inclusive of any connections to the feeder main. Separate permits from the individual private utilities will be required. Private utilities designs will be required prior to construction.
22. All man-made features required by this Code shall be maintained in good condition, or otherwise replaced by the owner.
23. Engineering Comments dated June 21, 2024 are considered conditions of approval and shall be met prior to building occupancy.

## MATERIALS TO BE PART OF THE RECORD

File SDR 2-24

## EXHIBITS

- A. Engineering Comments, City Planner Eric Mongan, June 21, 2024
- B. Applicant's Narrative & Application, received June 12, 2024

## **EXHIBIT A:**

## MEMO

To: Leni Crow, Assistant Planner

From: Eric Mongan, City Planner

**Subject: ENGINEERING COMMENTS FOR SDR 2-24 (MALK; TL 500 GETTY CIRCLE)**

Date: June 21, 2024

The following comments are based on completed Land Use Application SDR 2-24. These comments deal with the development of the parcel. Changes may occur during the review process and/or development phase that will be in conflict with statements below and some issues may have been overlooked that will be commented on during the review process and/or development phase of this project.

### General

- Development of the property will require that all cable utilities be placed underground including telephone, television and power. This requirement is inclusive of any connections to the feeder main. Separate permits from the individual private utilities will be required. Private utilities designs will be required prior to construction.
- Subdivision Plan shows Lot 7 is 0.98 acres. A City of Cottage Grove Erosion Prevention Permit Erosion control measures should be installed and approved prior to resuming construction.
- Traffic control shall be in accordance of the Manual of Uniform Traffic Control Devices for all work performed in the public right-of-way.
- Developer will be responsible for payment of all system development charges and design review and other associated fees.
- The City of Cottage Grove requires a minimum of five feet horizontal separation from its utilities and all other utilities. This distance is measured from outside of pipe to outside of pipe. Other utility companies may have stricter standards than this. The standard with the greatest separation will apply.

### Streets

- Erosion control measures shall be maintained and operational throughout construction.
- Site has access off Getty Circle. Proposed plans show a new driveway approach off Getty Circle. The driveway approach shall follow City Standard Detail No. 215. Contact the Engineering department for details.
- Sidewalk exists along Getty Circle. Any damage to sidewalk during construction, will result in replacement of a sidewalk panel. Any replacement work shall meet City Standards. Contact Engineering department for details.

- Any new utility work, repair of any utility work, connection to any utility within Getty Circle or street patching in those two streets shall conform to the City of Cottage Grove Standard Drawing No. 602. Contact Engineering Department for details

### Water

- A 6-inch water line is stubbed into Lot 7 with a 2 inch blow off assembly according to the Industrial Park Plans. The line is located approximately 4.5 feet north of the southern property line.
- A fire hydrant is located near the southeast corner of Lot 7.
- Upon payment of fee, the City of Cottage Public Works crew will tap and set water meters. The crew tries to schedule installation within 10 business day. Crew will provide a stub out of the back side of the meter so private plumber can install backflow devices and install the remaining portion of the water service.
- Water meter(s) shall be placed in the sidewalk. The meter shall be place in a matter that they will not be covered up with parked vehicles, personal property, and/or trash cans.
- All new development is required to install a backflow device on the customer side of each water meter. This requirement can be deferred until the building permit process. Contact Utility Maintenance Supervisor for details.
- The Oregon Administrative Rules requires a 10-foot horizontal separation between water lines and sanitary sewer lines include water and sewer services within the public right of way.
- Building permit plans shall show irrigation lines, number of sprinkler heads and irrigation zones as well as any irrigation meter on the building permit plans to properly size the irrigation meter.
- Show water fixtures for each unit on the building plans so staff can check meter size for each unit as outlined in the plumbing code. Please include any hose bibbs on the building permit plans
- Developers are is responsible for the costs and the construction of the water services on private property from the back side of the water meter to the building or units.

### Sanitary Sewer

- A 6-inch sanitary sewer line is stubbed onto the site. The sanitary sewer service line is located approximately 5 feet south of the north property line according to Industrial Park Plans.
- The City requires a cleanout at property line. See City of Cottage Grove Standard Detail No. 304. Contact Engineering Department for details.
- New sanitary sewer services shall be constructed to City standards for the proposed lots. Pipe standards for sanitary sewer service laterals shall be D3034 PVC pipe and a sanitary sewer cleanout for each lateral is required at the property line. See Engineering Department for details.
- Developers are is responsible for the costs and the construction of the sewer services on private property.

### Storm Drainage

- A 10-inch PVC storm drainage main in stub into Lot 7. Plans show this line is approximately 10 feet south of the north property line.
- Storm water runoff is not to adversely affect adjacent property owners; therefore no overland flow is allowed. All storm water runoff from this development shall be contained on the property prior to connecting the public storm drainage system. Building plans should include spot elevations or enough detail to show staff that all storm water runoff from site is captured on site before entering the public storm drainage system, especially from back of driveway approach. This may include a trench drain at the back of driveway approach.
- If any new on-site catch basins on site shall meet the standards as outlined by the Uniform Plumbing Code.
- On-site stormwater detention and treatment shall be install per approved plans.



400 Main Street Cottage Grove, OR 97424

File No.: SDR 2-24  
Date Submitted by Applicant: 5/28/24  
Date Deemed Complete: \_\_\_\_\_

**TYPE III PERMIT APPLICATION**

To: City of Cottage Grove Planning Commission

**A. Applicant**

- 1. Name: Ric Christian Phone No.: 541-942-0126
- 2. Mailing Address: 806 N. 9th St.
- 3. Email Address: ric@geomax.us
- 4. Status: Owner  Agent

Note: If agent you must have owner's consent and signature.

**B. Owner (if not applicant)**

- 4. Owner's Name: Malk II, LLC Kevin Solonsky Phone No.: 541-429-1133
- 5. Owner's Mailing Address: 6211 Vorlich Lane, Bethesda MD 20816

**C. Location of Property**

- 6. Address/Location: Lot 7, Cottage Grove Industrial Park, Cottage Grove, OR
- 7. Map & Tax Lot Number: 20-03-32-43-00500
- 8. Present Use: Vacant
- 9. Proposed Use: Rental shops

**D. Request for Consideration**

- 10. Type of Land Use Application applying for: Site Design Review  
Options: Conditional Use, Greenway Conditional Use, Cottage Industry, Historic Alteration, Land Use District Map changes (no plan amendment required), Master Planned Developments, Site Design Reviews, Subdivisions, Variance (Class C)
- 11. Is this application filed in association with other land use permit applications?  
 Yes  No
- 12. Reasons for Application: Site design review

**E. Required Information**

- Narrative Statement:** This application must be filed with one copy of a narrative statement that explains how the application satisfies each and all of the relevant criteria and standards in sufficient detail for review and decision-making.  
**Note:** Additional information may be required under the specific application requirements for each approval, e.g., Chapters 4.2 (Land Use Review), 4.3 (Land Divisions), 4.4 (Conditional Use), 4.5 (Master Planned Developments), 4.6 (Modifications), 4.8 (Code Interpretations), 4.9 (Miscellaneous Permits) and 5.1 (Variances).
- Plans:** Three (3) sets of plans, including one (1) set of plans in a reproducible form that is no larger than 11"x17" in size. Content of plans will vary with application type. Refer to submittal requirements for specific application type.
- Neighborhood Meeting verification** (for Master Planned Developments, Conditional Uses and Subdivisions). Must include copy of meeting notice and minutes and/or recording of meeting.
- Non-refundable application fee.**

**G. Signature**

I hereby request a Type III Permit on the above described real property, which is either owned by or under contract of sale to the applicant, and is located within the City of Cottage Grove, Oregon.

I hereby acknowledge that this application is not considered filed and complete until all of the required information has been submitted as determined by the Community Development Director and all required fees have been paid in full. Once the original application is submitted, Staff has 30 days to determine whether an application is complete. Within 30 days a letter will be mailed to you either deeming the application complete or requesting additional information. If additional information is requested you have 150 days to either: submit the missing information, submit some of the information and written notice that no other information will be provided, or submit a written notice that none of the missing information will be provided. *Once your application is deemed complete* you will be assigned a public hearing date before the Planning Commission and Staff will have 120 days to complete the processing of your application. (ORS 227.178)

	Owner:	Agent:
Signature:	<u>Kevin Solonsky</u>	<u>Ric Christian</u>
Name:	Kevin Solonsky	Ric Christian
Date:	<u>5/23/24</u>	<u>5/14/24</u>

**Office Use Only**

Date Application Received:	_____	Initials:	_____
Date Application Complete:	_____	Initials:	_____
Applicant Notified of Completeness:	_____		
Fee Paid:	_____	Receipt No.:	_____
		Initials:	_____



806 N. Ninth St. Cottage Grove, OR 97424  
Telephone (541) 942-0126 • geomax@geomax.us

## NARRATIVE

Proposed rental shop spaces  
Lot 7, Cottage Grove Industrial Park  
Getty Circle  
Cottage Grove, OR  
T.L. 20-03-32-43: 00500

Zoning: —M Industrial

### 14.24.110 Allowable Uses

The proposed rental shops will contain Light Industrial Services which are a permitted use in the M District.

### Section 14.24.120 Setbacks.

- C. Front Yard Setback: Minimum 20'. Street setback is 22.3' from Getty Circle.
- D. Rear Yard Setbacks: Adjacent to Industrial District: 10'. Rear setback ranges from 6.9' to 1.3' at the northwest corner of the building. An 18' rocked driveway exists on City of Cottage Grove property at the of the wetlands west of the site.
- E. Side Yard Setbacks: No setback required since site abuts M properties at the north and south, however setback from the north property line is 10' and from the south property line is 95.5'.
- F. Minimum landscape area: 5%. 14% provided including ground covers, shrubs, trees and grass. Landscaping along parking areas: 10% required, 11% provided.
- G.
  - 1. Buffering: A 10' grassy area will be provided at the north side of the parcel with a 7' landscaped buffer at the south side and 6' grassy area at the west side of the parking/driveway.
  - 2. Pedestrian Access: Access provided to front of building from Getty Circle.

### 14.24.130 Lot coverage

- B. Maximum building coverage, 80%: Total site size: 42730 sq. ft. Lot coverage including all impervious surfaces is 34980 sq. ft. Total lot coverage is 80%

### 14.24.140 Site Layout and Design

#### A. Development Compatibility

- 1. All adjacent uses are M zoning. No mechanical equipment will be located outside of

the building envelope. All exterior lighting is low cutoff to limit encroachment on adjacent properties.

2. There will be no adverse impacts to adjacent properties.

B. Large Scale Commercial Development: Not applicable.

C. Special Use Standards - BP Districts: Not applicable.

#### 14.24.150 Building & Structure Height

Maximum height of proposed building is 19'-0".

14.24.160 Large Site Master Planning Requirements: Not applicable

#### 14.30.200 Design Standards

##### A. Major Project

- Access and Circulation per plans.
- Landscaping per plans.
- Parking and Loading per plans.
- No Public Facilities are proposed.
- Surface Water Management per plans.
- No Signs are proposed. Rental clients will be responsible for signage if desired.
- No sensitive lands associated with this site.
- 

B. Minor Project is not applicable.

C. Non-Conforming Situations not applicable.

#### 14.33.300 Parking Standards

##### B. Vehicle Parking

Required parking (Table 14.33.300.A): Light and Medium Manufacturing and Production 1 space per 1000 square feet. Warehouse and Freight Movement 1 space per 2000 square feet. Not knowing which of these will apply the plan has 18 parking spaces. Total building square footage is 15,720 requiring either 15 or 8 spaces. No on street parking is proposed. One ADA parking space is provided. ADA parking signage will be attached on post at ADA parking space.

#### 14.33.400 Bicycle Parking

Manufacturing and Production: Two bicycle parking spaces are provided at the exterior of



the building. Long term parking spaces will be at the interior of each rental space.

14.33.500 Loading Areas. The proposed building is less than 20,000 sq. ft. No loading area required.

14.42.600 Approval Criteria

4. a. Access and circulation are proposed from the cul-de-sac at the south end of Getty Circle. Entry and exiting are via curb cut at the cul-de-sac.
- b. Trees exist along the street. No other significant vegetation is present on the site. A landscape plan has been supplied with submitted drawings. Only trees within access points will be removed.
- c. Parking and loading areas are on site as demonstrated on the site plan.
- d. No public facilities are proposed on site.
- e. Surface water will be collected on site and outfall to the public system at the northeast corner of the site.
- f. No other standards apply.
- g. No sensitive lands area affected by this development.

14.42.700

- A. No public improvements are proposed.
- B. Performance bonds are not necessary.
- C. A landscaping plan is shown on submitted drawings.

## GENERAL NOTES:

### GENERAL NOTES

- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE 2019 EDITION OF THE OREGON STRUCTURAL SPECIALTY CODE (OSSC), LOCAL RULES AND STANDARDS OF GOVERNING AGENCIES HAVING JURISDICTION.
- PRIOR TO DIGGING VERIFY LOCATION AND DEPTH OF UTILITIES AND ANY OTHER UNDERGROUND INTERFERENCE. CALL TWO BUSINESS DAYS BEFORE YOU DIG AT 811.
- CONTRACTOR IS RESPONSIBLE FOR VERIFICATION OF SITE CONDITIONS, INSTALLATION STANDARDS AND CONSTRUCTION CONDITIONS. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS PRIOR TO SHOP FABRICATION AND/OR FIELD ERECTION. DISCREPANCIES BETWEEN SITE CONDITIONS AND THE CONSTRUCTION DRAWINGS SHALL BE CALLED TO THE ATTENTION OF THE ENGINEER. WORK DONE WITHOUT THE ENGINEER'S APPROVAL IS THE RESPONSIBILITY OF THE CONTRACTOR.
- ALL SPECIAL INSPECTION AND TESTING SHALL BE PERFORMED BY AN INDEPENDENT INSPECTION AND TESTING AGENCY HIRED BY THE OWNER. CONTRACTOR SHALL COORDINATE WITH INSPECTION AND TESTING AGENCY FOR REQUIRED CONSTRUCTION INSPECTIONS AND MATERIAL TESTING.
- DESIGN LOADS: PER 2019 OSSC, ASCE 7-16  
OCCUPANCY CATEGORY = II  
LIVE LOADS:  
• ROOF = 20 PSF  
• FLOOR = 250 PSF, OR 3000 LBF (CONCENTRATED)  
SNOW:  
• ROOF = 20 PSF  
• IS = 1.0  
WIND:  
• SPEED = 120 MPH  
• EXPOSURE = B  
• Iw = 1.0  
SEISMIC:  
• Ie = 1.0  
• USE GROUP = I  
• SITE CLASS = D  
• Ss = 0.611 g  
• S1 = 0.392 g
- REFERENCES:  
• OSSC 2019  
• ASCE 7-16  
• ACI 318-19  
• AISI MANUAL FOR COLD-FORMED STEEL CONSTRUCTION, 2016 ED.

### SITE WORK

- ALL FILL OR BACKFILL SHALL BE COMPACTED TO 95% OF MAXIMUM DENSITY IN ACCORDANCE WITH ASTM D1557 FOR COHESIVE SOILS.
- REMOVE ALL DEBRIS FROM THE AREA TO BE BACKFILLED PRIOR TO BACKFILLING.
- PLACE LOAD BEARING BACKFILL IN LAYERS NOT MORE THAN 8 INCHES THICK, LOOSE MEASUREMENT. SPREAD AND COMPACT EACH LAYER UNIFORMLY TO THE REQUIRED DENSITY.

### FOUNDATIONS

- FOUNDATION DESIGN BASED ON AN ALLOWABLE SOIL BEARING OF 1,500 PSF.

### CONCRETE

- ALL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI AT 28 DAYS. CONCRETE DESIGN IS BASED ON A COMPRESSIVE STRENGTH OF 2500 PSI, SPECIAL INSPECTION NOT REQUIRED.
- REINFORCEMENT SHALL CONFORM TO ASTM A615, GRADE 60 MINIMUM, DEFORMED, FABRICATE REINFORCEMENT PER ACI 318-19, CLASS "B" SPLICES UNLESS NOTED OTHERWISE. SLAB REINFORCEMENT MAY BE ASTM A82 WELDED WIRE FABRIC.
- REINFORCEMENT SHALL BE CONTINUOUS BENT AROUND CORNERS, OR CORNER BARS OF THE SAME SIZE MAY BE INSTALLED WITH MINIMUM LEG LENGTH THAT CONFORMS TO ACI 318-19, CLASS "B" SPLICES.
- TOOL ALL EXPOSED EDGES WITH A CONCAVE TOOLING DEVICE.
- ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH ACI 117 AND ACI 301.
- CAST IN PLACE CONCRETE SHALL MEET THE FOLLOWING REQUIREMENTS:  
• ACI 117 - STANDARD SPECIFICATIONS FOR TOLERANCES FOR CONCRETE CONSTRUCTION AND MATERIALS  
• ACI 301 - SPECIFICATIONS FOR STRUCTURAL CONCRETE  
• ACI 302 - GUIDE FOR CONCRETE FLOOR AND SLAB CONSTRUCTION  
• ACI 305 - HOT WEATHER CONCRETING  
• ACI 306 - COLD WEATHER CONCRETING
- WELDING OF REINFORCING BARS SHALL NOT BE PERMITTED.

### COLD-FORMED STEEL

- ALL COLD-FORMED STEEL SECTIONS SHALL CONFORM TO ASTM A653 55, GRADE 33 OR ASTM A653 55 GRADE 50/1. ALL OTHER STEEL SHALL CONFORM TO ASTM A36.
- ALL BOLTS SHALL CONFORM TO ASTM A307, OR AS SPECIFIED ON THE DRAWINGS. ALL SCREWS SHALL BE SELF-TAPPING, CONFORMING TO AISI 2016 EDITION.
- BOLT HOLES, BOLT END AND EDGE DISTANCES AND BOLT LENGTHS SHALL BE PER AISI 2016 EDITION, UNLESS NOTED OTHERWISE. SCREW SPACING, EDGE AND END DISTANCES SHALL BE PER AISI 2016 EDITION, UNLESS NOTED OTHERWISE.
- ALL WELDING SHALL BE DONE BY AWS CERTIFIED WELDERS AND SHALL CONFORM TO AWS D-1.1. ELECTRODES SHALL BE E70 MINIMUM.
- BOLTING INTO CONCRETE SHALL BE DONE USING ITW RAMBOLT / REDHEAD LDT BOLTS, SIMPSON TITEN HD AND/OR THREADED ROD SET IN SIMPSON ET22 EPOXY-TIE ADHESIVE.

SCALE  
DO NOT SCALE DRAWINGS. USE DIMENSIONS PROVIDED. GRAPHIC SCALE INDICATIONS ARE SHOWN AS A GUIDE FOR INTERPRETATION OF DRAWINGS.

ADDRESS  
LOT 1, COTTAGE GROVE INDUSTRIAL PARK, COTTAGE GROVE, OR.

## DESIGN CRITERIA

Building Type: II-B  
Occupancy: Manufacturing F-1

## NOTES

- Site shall be graded in accordance with the approved grading plans. Contractor shall obtain a grading permit prior to commencing work.
- If the ground area to be disturbed exceeds one acre, a 1200-C Erosion Control Permit will be required prior to beginning construction. Local codes may require erosion control plans for smaller areas.
- If soft or expansive clay soils are encountered during site preparation, the contractor shall contact the engineer before proceeding with grading, backfill or foundation forming.
- All fill shall be granular crushed rock or approved containing less than 1% passing the number 200 sieve and shall be free of organic material.
- All fill and backfill shall be compacted to 95% of maximum dry density as determined by AASHTO T-99.
- All slabs including thickened edges shall bear on minimum 4" of crushed rock 3/4" or less in least dimension.
- All utility lines shall be installed as shown on the approved utility or site plan. On site utilities shall conform to the requirements of the local building code. Off site utilities shall conform to the requirements of the state, local government and utility that will assume ownership of the utility line.
- Construction shall meet the requirements of the current edition of the Oregon State Structural Specialty Code.

## BUILDING MATERIALS

- Perimeter wall anchor bolts shall be Titen HD by Simpson, Min 3" edge distance, 2" embedment, Min 9" separation.
- Interior wall anchors shall be Titen "HD".
- Steel Exterior Siding shall be Taylor "PBR", 80 ksi yield, .018" unless noted otherwise.
- Steel Roof Sheathing shall be Taylor "PBR", 80 ksi yield, .020" unless noted otherwise.
- Steel Interior Sheathing shall be Taylor "Corrugated", 80 ksi yield, .015" unless noted otherwise.
- Steel framing members including but not limited to studs, columns, purlins, girts and plates shall conform to the requirements of the Light Gauge Steel Institute for shape, thickness, yield strength and corrosion protection.
- Steel framing members shall be galvanized and shall conform to ASTM A-653 grade 33 steel for all sections .043" and thinner U.O.N.
- Steel framing members shall be galvanized and shall conform to ASTM A-653, grade 50 steel for all sections .054" and thicker U.O.N.
- Steel framing members shall conform to ASTM A-924 galvanizing specification.
- Steel framing members shall comply with ASTM A-1003.
- All metal to metal screws shall be Camca-Textron, type 2 point unless noted otherwise. Sheathing screws shall have neoprene washers.
- All gypsum wall board shall be Type X unless noted otherwise under "Fire Wall Assemblies".
- Insulation, where called for, shall be fiberglass batt unless noted otherwise.

## FIRE WALL ASSEMBLIES (WHERE SHOWN ON PLANS)

- 1 Hour** Generic Assembly GA File No. WFI012: One layer 5/8" type X gypsum wall board or gypsum veneer base applied parallel to each side of steel studs 24" O.C. with 1" long Type 5 drywall screws 6" O.C. at vertical joints and floor and ceiling runners, 12" O.C. at intermediate studs. Joints staggered 24" on opposite sides of walls.
- 2 Hour** Proprietary Assembly USG File No. UL Des U423 or U425: Two layers 5/8" Sheetrock Firecode Core gypsum sheathing, Firerock Aqua-Tough sheathing or Securock glass-mat sheathing exterior side. 3 1/2" 20 gauge structural studs 24" o/c. Two layers 5/8" Sheetrock Firecode Core gypsum panels @ interior.
- 3 Hour** Proprietary Assembly GA File No. WIP2922: Base layer 1/2" type X gypsum wallboard applied parallel to each side of steel studs 24" O.C. with 1" long Type 5 drywall screws 36" O.C. (max). Second layer 1/2" type X gypsum wallboard applied parallel or right angles to each side with 1-5/8" long Type 5 drywall screws 24" O.C. (max). Face layer 1/2" type X gypsum wall board applied at right angles to each side with 2-1/4" Type 5 drywall screws 12" O.C. and 1-1/2" Type G drywall screws midway between studs 1-1/2" above and below horizontal joints. Joints staggered 24" each layer and side.
- Approved proprietary GWB brands and styles are  
American Gypsum Co. 1/2" FireBloc TYPE C  
BPB America, Inc. 1/2" ProRoc Type C Gypsum Panels  
G-P Gypsum 1/2" ToughRock Fireguard C  
LaFarge North America Inc. 1/2" Firecheck Type C  
PABCO Gypsum 1/2" FLAME CURB Super "C"  
Temple Inland Forest Prod. Corp 1/2" TG-C

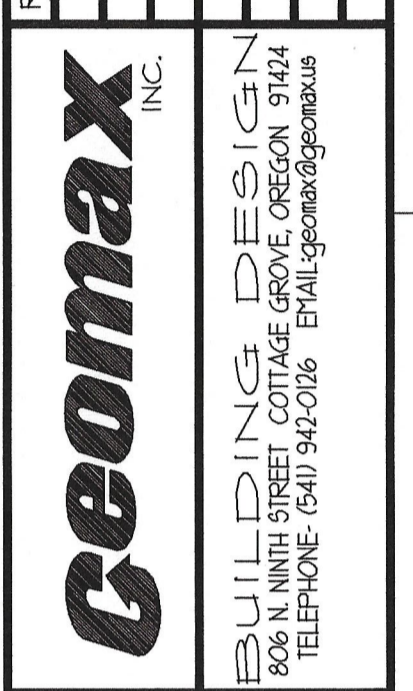
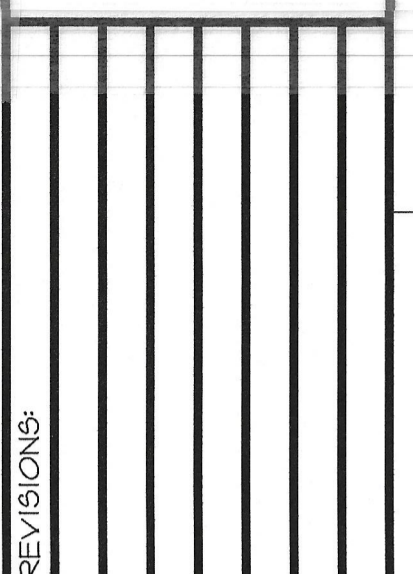
**NOTE:** Screw spacing on base layer is to be the closer of Firewall Assembly spacing or Shear Panel spacing (4" O.C. all sheet edges and 4" O.C. in sheet field).

## FOUNDATION NOTES

- Perimeter anchor bolts shall be Titen "HD" size as called on FNDN plans.
- Column anchors shall be of the size called for in on Sheet 5D1. Interior longitudinal walls shall also be anchored with Titen "HD" anchors, set at 60" O.C. on interior longitudinal walls for shear.
- Install 3"x4" square flat washers under all anchor bolt nuts or heads @ 3/2" walls and 6"x4" square flat washers @ 6" walls.
- Grade beams 5" deep and 14" wide shall be installed below all walls supporting purlins spanning more than 14 feet unless noted otherwise.
- See foundation and floor plans for lateral load wall hold-down locations and sizes.
- Finish floors to smooth troweled finish.

## FRAMING NOTES

- All exterior steel sheathing shall be oriented vertically and attached to plates and studs with #8/32 X 1" screws at 6" O.C. unless noted otherwise.
- Steel sheathing for all interior partition walls shall be applied horizontally and fastened w/#2x14 screws @ 12" O.C. plates and columns.
- Screws shall be #8/32 or #12/26 or as noted.
- Where firewalls are called on the plans, construct in accordance with standard firewall assemblies called out on this sheet. Gypsum wall board shall be attached with minimum #6 X 1" screws (longer for multiple layers as noted) set @ 4" O.C. at sheet edges and 4" in field.
- All roof sheathing shall be attached to purlins and exterior walls with #12/26 X 1" screws on the following schedule:  
6" OC within 8 feet of end walls  
12" OC on interior field of roof.
- Columns supporting purlins shall be anchored to slab and attached to base track as shown on "Base Attachment Schedule" and details Sheet 5D1.
- Eave Wall Stud/Track Connectors are 2 EA #8/32 X 1/2" screws @ ea. stud at portal panels use 2 ea #12/26 X 1" screws at each stud supporting O/H door Headers.
- Corner columns shall be Double xxx5200-33 Studs and shall be attached to plates with 4 ea #12/26 X 1" screws, anchor with 1 EA 3/8" x 3" Titen "HD" anchor in each plate see 5D-1.
- Place all screws as follows - Unless noted otherwise:  
Edge Distance on Plate = 3/4"  
End Distance on Column = 1/2"  
C-C Spacing = 1" (Load Direction)  
Row-Row = 3/4"
- Purlins shall be sized & connected per Furlin Schedule on Sheet 5D1. No. of screws shown are per purlin, per end. (i.e. use 6 screws for 12' span at column supporting two purlin spans).
- Columns supporting purlins shall be back to back 6005250-33 unless noted otherwise. Fasten components as noted on details.
- All base plates shall be 600T200-43. All top plates shall be 600T200-43 unless noted otherwise. Base with is 3 3/8" or 6", see floor plan, detail. Base plates shall be connected per base attachment schedule.
- Door headers shall be sized and connected per Details on Sheet 5D1.



PROJECT TITLE:  
**NEW RENT-A-SHOPS  
MALK II  
COTTAGE GROVE, OR**

SHEET TITLE:  
**GENERAL CONSTRUCTION NOTES**

DATE: 3/31/23  
DESIGNER: R.L.C.  
CHECKED BY: L.R.L.  
FILE NO: W062GN1.DWG  
PROJECT NO:  
**W062**  
SHEET NO:  
**GN 1**



## COMcheck Software Version 4.1.5.3

# Envelope Compliance Certificate

### Project Information

Energy Code: 90.1 (2016) Standard  
Project Title: New Rental Shops  
Location: Cottage Grove, Oregon  
Climate Zone: 4c  
Project Type: New Construction  
Vertical Glazing / Wall Area: 10%  
Performance Sim. Specs: EnergyPlus 8.1.0.009 (EPW: USA\_OR\_Eugene-Mahlon.Sweet.AP.726930\_TMY3.epw)

Construction Site: Lot 7 Cottage Grove Industrial Park Cottage Grove, OR 97424	Owner/Agent: Alan Solonski Malk, LLC 342 Bromley Place Brainbridge Island, WA 98110 206-914-3505 ofishal@aol.com	Designer/Contractor: Richard Christian Geomax Inc. 806 N. 9th Street Cottage Grove, OR 97424 541-942-0126 ric@geomax.us
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### Building Area

### Floor Area

1-Unit A (Warehouse) : Nonresidential	2040
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### Envelope Assemblies

Assembly	Gross Area or Perimeter	Cavity R-Value	Cont. R-Value	Proposed U-Factor	Budget U- Factor <sup>(a)</sup>
Roof 1: Metal Building, Screw Down, Single Insulation Layer without Thermal Blocks, [Bldg. Use 1 - Unit A]	2040	3.0	13.0	0.071	0.037
<b><u>NORTH</u></b>					
Exterior Wall 1: Steel-Framed, 24" o.c., [Bldg. Use 1 - Unit A]	490	21.0	21.0	0.031	0.064
<b><u>EAST</u></b>					
Semi-Exterior Wall 1: Steel-Framed, 24" o.c., [Bldg. Use 1 - Unit A]	1195	21.0	21.0	0.031	0.124
<b><u>SOUTH</u></b>					
Exterior Wall 3: Steel-Framed, 24" o.c., [Bldg. Use 1 - Unit A]	282	21.0	21.0	0.031	0.064
Window 1: Vinyl/Fiberglass Frame:Operable, Perf. Type: Energy code default, Double Pane, Clear , SHGC 0.59, VT 0.64, [Bldg. Use 1 - Unit A]	9	---	---	0.600	0.310
Door 1: Insulated Metal, Non-Swinging, [Bldg. Use 1 - Unit A]	168	---	---	0.038	0.310
Door 2: Insulated Metal, Swinging, [Bldg. Use 1 - Unit A]	21	---	---	0.360	0.370
<b><u>WEST</u></b>					
Exterior Wall 2: Steel-Framed, 24" o.c., [Bldg. Use 1 - Unit A]	1195	21.0	21.0	0.031	0.064

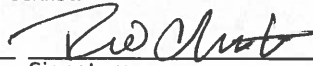
(a) Budget U-factors are used for software baseline calculations ONLY, and are not code requirements.

**Envelope PASSES: Design 11% better than code**

**Envelope Compliance Statement**

*Compliance Statement:* The proposed envelope design represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed envelope systems have been designed to meet the 90.1 (2016) Standard requirements in COMcheck Version 4.1.5.3 and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Ric CHRISTIAN  
Name - Title

  
Signature

6/28/23  
Date







COMcheck Software Version 4.1.5.3

# Mechanical Compliance Certificate

## Project Information

Energy Code: 90.1 (2016) Standard  
Project Title: New Rental Shops  
Location: Cottage Grove, Oregon  
Climate Zone: 4c  
Project Type: New Construction

Construction Site:  
Lot 7  
Cottage Grove Industrial Park  
Cottage Grove, OR 97424

Owner/Agent:  
Alan Solonski  
Malk, LLC  
342 Bromley Place  
Brainbridge Island, WA 98110  
206-914-3505  
ofishal@aol.com

Designer/Contractor:  
Richard Christian  
Geomax Inc.  
806 N. 9th Street  
Cottage Grove, OR 97424  
541-942-0126  
ric@geomax.us

## Mechanical Systems List

### Quantity System Type & Description

- |   |  |
|---|--|
| 1 | HVAC System 1 (Single Zone):<br>Heating: 1 each - Unit Heater, Gas, Capacity = 80 kBtu/h<br>Proposed Efficiency = 80.00% Ec, Required Efficiency: 80.00 % Ec<br>Fan System: None |
|---|--|

## Mechanical Compliance Statement

*Compliance Statement:* The proposed mechanical design represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed mechanical systems have been designed to meet the 90.1 (2016) Standard requirements in COMcheck Version 4.1.5.3 and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Ric CHRISTIAN  
Name - Title

  
Signature

6/28/23  
Date



# COMcheck Software Version 4.1.5.3

## Inspection Checklist

Energy Code: 90.1 (2016) Standard

Requirements: 100.0% were addressed directly in the COMcheck software

Text in the "Comments/Assumptions" column is provided by the user in the COMcheck Requirements screen. For each requirement, the user certifies that a code requirement will be met and how that is documented, or that an exception is being claimed. Where compliance is itemized in a separate table, a reference to that table is provided.

Section # & Req.ID	Plan Review	Complies?	Comments/Assumptions
4.2.2, 5.4.3.1.1, 5.7 [PR1] <sup>1</sup>	Plans and/or specifications provide all information with which compliance can be determined for the building envelope and document where exceptions to the standard are claimed.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met. <b>Location on plans/spec: SD1</b>
4.2.2, 6.4.4.2.1, 6.7.2 [PR2] <sup>1</sup>	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the mechanical systems and equipment and document where exceptions to the standard are claimed. Load calculations per acceptable engineering standards and handbooks.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met. <b>Location on plans/spec: A3</b>
4.2.2, 8.4.1.1, 8.4.1.2, 8.7 [PR6] <sup>2</sup>	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the electrical systems and equipment and document where exceptions are claimed. Feeder connectors sized in accordance with approved plans and branch circuits sized for maximum drop of 3%.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met. <b>Location on plans/spec: A3</b>
4.2.2, 9.4.3, 9.7 [PR4] <sup>1</sup>	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the interior lighting and electrical systems and equipment and document where exceptions to the standard are claimed. Information provided should include interior lighting power calculations, wattage of bulbs and ballasts, transformers and control devices.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met. <b>Location on plans/spec: A3</b>
9.7 [PR8] <sup>1</sup>	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the exterior lighting and electrical systems and equipment and document where exceptions to the standard are claimed. Information provided should include exterior lighting power calculations, wattage of bulbs and ballasts, transformers and control devices.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met. <b>Location on plans/spec: A3</b>
6.7.2.4 [PR5] <sup>1</sup>	Detailed instructions for HVAC systems commissioning included on the plans or specifications for projects >=50,000 ft <sup>2</sup> .	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	<b>Exception:</b> Requirement does not apply.

1 High Impact (Tier 1)	2 Medium Impact (Tier 2)	3 Low Impact (Tier 3)
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**Additional Comments/Assumptions:**

1	High Impact (Tier 1)	2	Medium Impact (Tier 2)	3	Low Impact (Tier 3)
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Section # & Req.ID	Footing / Foundation Inspection	Plans Verified Value	Field Verified Value	Complies?	Comments/Assumptions
4.2.4 [FO1] <sup>2</sup>	Installed below-grade wall insulation type and R-value consistent with insulation specifications reported in plans and COMcheck reports.	R-____	R-____	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	See the Envelope Assemblies table for values.
4.2.4 [FO3] <sup>2</sup>	Installed slab-on-grade insulation type and R-value consistent with insulation specifications reported in plans and COMcheck reports.	R-____ <input type="checkbox"/> Unheated <input type="checkbox"/> Heated	R-____ <input type="checkbox"/> Unheated <input type="checkbox"/> Heated	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	See the Envelope Assemblies table for values.
5.5.3.5 [FO5] <sup>2</sup>	Slab edge insulation depth/length.	____ ft	____ ft	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	See the Envelope Assemblies table for values.
5.8.1.7 [FO6] <sup>1</sup>	Exterior insulation protected against damage, sunlight, moisture, wind, landscaping and equipment maintenance activities.			<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met. <b>Location on plans/spec:</b> SD1
5.8.1.7.3 [FO7] <sup>1</sup>	Insulation in contact with the ground has <=0.3% water absorption rate per ASTM C272.			<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
6.4.3.7 [FO9] <sup>3</sup>	Freeze protection and snow/ice melting system sensors for future connection to controls.			<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	<b>Exception:</b> Requirement does not apply.

**Additional Comments/Assumptions:**

1 High Impact (Tier 1)	2 Medium Impact (Tier 2)	3 Low Impact (Tier 3)
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Section # & Req.ID	Framing / Rough-In Inspection	Plans Verified Value	Field Verified Value	Complies?	Comments/Assumptions
5.4.3.2 [FR1] <sup>3</sup>	Factory-built and site-assembled fenestration and doors are labeled or certified as meeting air leakage requirements.			<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	<b>Exception:</b> Metal coiling doors in semiheated spaces in zones 1-6 when leakage is = 1.0 CFM/ft <sup>2</sup> .
5.4.3.4 [FR4] <sup>3</sup>	Vestibules are installed where building entrances separate conditioned space from the exterior, and meet exterior envelope requirements. Doors have self-closing devices, and are >=7 ft apart (>= 16 ft apart for adjoining floor area >= 40000 sq.ft.). Vestibule floor area <=7 50 sq.ft. or 2 percent of the adjoining conditioned floor area.			<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	<b>Exception:</b> Requirement does not apply.
5.5.4.3a [FR8] <sup>1</sup>	Vertical fenestration U-Factor.	U- ____	U- ____	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	See the Envelope Assemblies table for values.
5.5.4.3b [FR9] <sup>1</sup>	Skylight fenestration U-Factor.	U- ____	U- ____	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	See the Envelope Assemblies table for values.
5.5.4.4.1 [FR10] <sup>1</sup>	Vertical fenestration SHGC value.	SHGC: ____	SHGC: ____	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	See the Envelope Assemblies table for values.
5.5.4.4.2 [FR11] <sup>1</sup>	Skylight SHGC value.	SHGC: ____	SHGC: ____	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	See the Envelope Assemblies table for values.
5.8.2.1, 5.8.2.3, 5.8.2.4, 5.8.2.5 [FR12] <sup>2</sup>	Fenestration products rated (U-factor, SHGC, and VT) in accordance with NFRC or energy code defaults are used.			<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met. <b>Location on plans/spec:</b> A3
5.8.2.2 [FR13] <sup>1</sup>	Fenestration and door products are labeled, or a signed and dated certificate listing the U-factor, SHGC, VT, and air leakage rate has been provided by the manufacturer.			<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met. <b>Location on plans/spec:</b> A3
5.5.3.6 [FR14] <sup>2</sup>	U-factor of opaque doors associated with the building thermal envelope meets requirements.	U- ____ <input type="checkbox"/> Swinging <input type="checkbox"/> Nonswinging	U- ____ <input type="checkbox"/> Swinging <input type="checkbox"/> Nonswinging	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	See the Envelope Assemblies table for values.
5.4.3.1 [FR15] <sup>1</sup>	Continuous air barrier is wrapped, sealed, caulked, gasketed, and/or taped in an approved manner, except in semiheated spaces in climate zones 1-6.			<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	<b>Exception:</b> Requirement does not apply.

**Additional Comments/Assumptions:**

1 High Impact (Tier 1)	2 Medium Impact (Tier 2)	3 Low Impact (Tier 3)
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1	High Impact (Tier 1)	2	Medium Impact (Tier 2)	3	Low Impact (Tier 3)
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Section # & Req.ID	Mechanical Rough-In Inspection	Plans Verified Value	Field Verified Value	Complies?	Comments/Assumptions
6.4.1.4, 6.4.1.5 [ME1] <sup>2</sup>	HVAC equipment efficiency verified. Non-NAECA HVAC equipment labeled as meeting 90.1.	Efficiency: ____	Efficiency: ____	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	See the Mechanical Systems list for values.
6.4.3.4.1 [ME3] <sup>3</sup>	Stair and elevator shaft vents have motorized dampers that automatically close.			<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	<b>Exception:</b> Requirement does not apply.
6.4.3.4.2, 6.4.3.4.3 [ME4] <sup>3</sup>	Outdoor air and exhaust systems have motorized dampers that automatically shut when not in use and meet maximum leakage rates. Check gravity dampers where allowed.			<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	<b>Exception:</b> Gravity dampers acceptable in buildings 3 stories.
6.4.3.4.5 [ME39] <sup>3</sup>	Enclosed parking garage ventilation has automatic contaminant detection and capacity to stage or modulate fans to 50% or less of design capacity.			<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	<b>Exception:</b> Requirement does not apply.
6.4.3.4.4 [ME5] <sup>3</sup>	Ventilation fans >0.75 hp have automatic controls to shut off fan when not required.			<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met. <b>Location on plans/spec:</b> A3
6.4.3.8 [ME6] <sup>1</sup>	Demand control ventilation provided for spaces >500 ft <sup>2</sup> and >25 people/1000 ft <sup>2</sup> occupant density and served by systems with air side economizer, auto modulating outside air damper control, or design airflow >3,000 cfm.			<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	<b>Exception:</b> Systems with a design outdoor airflow less than 1200 cfm.
6.5.3.2.1 [ME40] <sup>2</sup>	DX cooling systems $\geq$ 75 kBtu/h ( $\geq$ 65 kBtu/h effective 1/2016) and chilled-water and evaporative cooling fan motor hp $\geq$ ¼ designed to vary supply fan airflow as a function of load and comply with operational requirements.			<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	<b>Exception:</b> Requirement does not apply. See the Mechanical Systems list for values.
6.4.4.1.1 [ME7] <sup>3</sup>	Insulation exposed to weather protected from damage. Insulation outside of the conditioned space and associated with cooling systems is vapor retardant.			<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
6.4.4.1.3 [ME9] <sup>2</sup>	HVAC piping insulation thickness. Where piping is installed in or under a slab, verification may need to occur during Foundation Inspection.	____ in.	____ in.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	<b>Exception:</b> Requirement does not apply.
6.4.4.1.4 [ME41] <sup>3</sup>	Thermally ineffective panel surfaces of sensible heating panels have insulation $\geq$ R-3.5.			<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	<b>Exception:</b> Requirement does not apply.
6.4.4.2.2 [ME11] <sup>3</sup>	Ductwork operating >3 in. water column requires air leakage testing.			<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	<b>Exception:</b> Requirement does not apply.

1 High Impact (Tier 1)    2 Medium Impact (Tier 2)    3 Low Impact (Tier 3)

Section # & Req.ID	Mechanical Rough-In Inspection	Plans Verified Value	Field Verified Value	Complies?	Comments/Assumptions
6.5.2.3 [ME19] <sup>3</sup>	Dehumidification controls provided to prevent reheating, recooling, mixing of hot and cold airstreams or concurrent heating and cooling of the same airstream.			<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.  <b>Location on plans/spec:</b> NA
6.5.2.4.1 [ME68] <sup>3</sup>	Humidifiers with airstream mounted preheating jackets have preheat auto-shutoff value set to activate when humidification is not required.			<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	<b>Exception:</b> Requirement does not apply.
6.5.2.4.2 [ME69] <sup>3</sup>	Humidification system dispersion tube hot surfaces in the airstreams of ducts or air-handling units insulated $\geq R-0.5$ .			<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	<b>Exception:</b> Requirement does not apply.
6.5.2.5 [ME70] <sup>3</sup>	Preheat coils controlled to stop heat output whenever mechanical cooling, including economizer operation, is active.			<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
6.5.2.6 [ME106] <sup>3</sup>	Units that provide ventilation air to multiple zones and operate in conjunction with zone heating and cooling systems are prevented from using heating or heat recovery to warm supply air above 60°F when representative building loads or outdoor air temperature indicate that most zones demand cooling.			<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	<b>Exception:</b> Requirement does not apply.
6.5.3.3 [ME42] <sup>3</sup>	Multiple zone VAV systems with DDC of individual zone boxes have static pressure setpoint reset controls.			<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	<b>Exception:</b> Requirement does not apply.  <i>See the Mechanical Systems list for values.</i>
6.5.4.2 [ME25] <sup>3</sup>	HVAC pumping systems with $\geq 3$ control valves designed for variable fluid flow (see section details).			<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	<b>Exception:</b> Requirement does not apply.
6.5.6.1 [ME56] <sup>1</sup>	Exhaust air energy recovery on systems meeting Tables 6.5.6.1-1, and 6.5.6.1-2.			<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	<b>Exception:</b> Requirement does not apply.
6.5.7.2.1 [ME32] <sup>2</sup>	Kitchen hoods $>5,000$ cfm have make up air $\geq 50\%$ of exhaust air volume.			<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	<b>Exception:</b> Requirement does not apply.
6.5.7.2.4 [ME49] <sup>3</sup>	Approved field test used to evaluate design air flow rates and demonstrate proper capture and containment of kitchen exhaust systems.			<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	<b>Exception:</b> Requirement does not apply.
6.5.8.1 [ME34] <sup>2</sup>	Unenclosed spaces that are heated use only radiant heat.			<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	<b>Exception:</b> Requirement does not apply.

1   High Impact (Tier 1)	2   Medium Impact (Tier 2)	3   Low Impact (Tier 3)
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Section # & Req.ID	Mechanical Rough-In Inspection	Plans Verified Value	Field Verified Value	Complies?	Comments/Assumptions
6.4.3.9 [ME63] <sup>2</sup>	Heating for vestibules and air curtains with integral heating include automatic controls that shut off the heating system when outdoor air temperatures > 45F. Vestibule heating and cooling systems controlled by a thermostat in the vestibule with heating setpoint <= 60F and cooling setpoint >= 80F.			<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	<b>Exception:</b> Requirement does not apply.
6.5.10 [ME73] <sup>3</sup>	Doors separating conditioned space from the outdoors have controls that disable/reset heating and cooling system when open.			<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.

**Additional Comments/Assumptions:**

1	High Impact (Tier 1)	2	Medium Impact (Tier 2)	3	Low Impact (Tier 3)
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Section # & Req.ID	Rough-In Electrical Inspection	Complies?	Comments/Assumptions
8.4.2 [EL10] <sup>2</sup>	At least 50% of all 125 volt 15- and 20-Amp receptacles are controlled by an automatic control device.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	<b>Exception:</b> Space type is not private office, open office, or computer classroom.
8.4.3 [EL11] <sup>2</sup>	New buildings have electrical energy use measurement devices installed. Where tenant spaces exist, each tenant is monitored separately. In buildings with a digital control system the energy use is transmitted to to control system and displayed graphically.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	<b>Exception:</b> Individual tenant spaces less than 10,000 ft <sup>2</sup> .
9.4.1.1 [EL1] <sup>2</sup>	Automatic control requirements prescribed in Table 9.6.1, for the appropriate space type, are installed. Mandatory lighting controls (labeled as 'REQ') and optional choice controls (labeled as 'ADD1' and 'ADD2') are implemented.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met. <b>Location on plans/spec:</b> A3
9.4.1.1 [EL2] <sup>2</sup>	Independent lighting controls installed per approved lighting plans and all manual controls readily accessible and visible to occupants.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met. <b>Location on plans/spec:</b> A3
9.4.1.1f [EL13] <sup>1</sup>	Daylight areas under skylights and roof monitors that have more than 150 W combined input power for general lighting are controlled by photocontrols.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	<b>Exception:</b> Requirement does not apply.
9.4.1.4 [EL3] <sup>2</sup>	Automatic lighting controls for exterior lighting installed.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met. <b>Location on plans/spec:</b> A3
9.4.1.4d [EL21] <sup>2</sup>	Outdoor parking area luminaires $\geq$ 78W and $\leq$ 24 ft height controlled to reduce wattage by 50% when area unoccupied over 15 minutes. Controlled power limited to $\leq$ 1500W.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	<b>Exception:</b> Requirement does not apply.
9.4.1.3 [EL4] <sup>1</sup>	Separate lighting control devices for specific uses installed per approved lighting plans.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met. <b>Location on plans/spec:</b> A3
9.6.2 [EL8] <sup>1</sup>	Additional interior lighting power allowed for special functions per the approved lighting plans and is automatically controlled and separated from general lighting.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met. <b>Location on plans/spec:</b> NA
10.4.1 [EL9] <sup>2</sup>	Electric motors meet requirements where applicable.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met. <b>Location on plans/spec:</b> NA

**Additional Comments/Assumptions:**

1	High Impact (Tier 1)	2	Medium Impact (Tier 2)	3	Low Impact (Tier 3)
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Section # & Req.ID	Insulation Inspection	Plans Verified Value	Field Verified Value	Complies?	Comments/Assumptions
4.2.4 [IN2] <sup>1</sup>	Installed roof insulation type and R-value consistent with insulation specifications reported in plans and COMcheck reports. For some ceiling systems, verification may need to occur during Framing Inspection.	R-____ <input type="checkbox"/> Above deck <input type="checkbox"/> Metal <input type="checkbox"/> Attic	R-____ <input type="checkbox"/> Above deck <input type="checkbox"/> Metal <input type="checkbox"/> Attic	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	See the Envelope Assemblies table for values.
5.8.1.2, 5.8.1.3 [IN3] <sup>1</sup>	Roof insulation installed per manufacturer's instructions. Blown or poured loose-fill insulation is installed only where the ceiling slope is <= 3:12.			<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
4.2.4 [IN6] <sup>1</sup>	Installed above-grade wall insulation type and R-value consistent with insulation specifications reported in plans and COMcheck reports.	R-____ <input type="checkbox"/> Mass <input type="checkbox"/> Metal <input type="checkbox"/> Steel <input type="checkbox"/> Wood	R-____ <input type="checkbox"/> Mass <input type="checkbox"/> Metal <input type="checkbox"/> Steel <input type="checkbox"/> Wood	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	See the Envelope Assemblies table for values.
5.8.1.2 [IN7] <sup>1</sup>	Above-grade wall insulation installed per manufacturer's instructions.			<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met. <b>Location on plans/spec:</b> SD1
4.2.4 [IN8] <sup>2</sup>	Installed floor insulation type and R-value consistent with insulation specifications reported in plans and COMcheck reports.	R-____ <input type="checkbox"/> Mass <input type="checkbox"/> Steel <input type="checkbox"/> Wood	R-____ <input type="checkbox"/> Mass <input type="checkbox"/> Steel <input type="checkbox"/> Wood	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	See the Envelope Assemblies table for values.
5.8.1.1 [IN10] <sup>2</sup>	Building envelope insulation is labeled with R-value or insulation certificate has been provided listing R-value and other relevant data.			<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
5.8.1.9 [IN18] <sup>2</sup>	Building envelope insulation extends over the full area of the component at the proposed rated R or U value.			<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
5.8.1.4 [IN11] <sup>2</sup>	Eaves are baffled to deflect air to above the insulation.			<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met. <b>Location on plans/spec:</b> NA
5.8.1.5 [IN12] <sup>2</sup>	Insulation is installed in substantial contact with the inside surface separating conditioned space from unconditional space.			<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met. <b>Location on plans/spec:</b> SD1
5.8.1.6 [IN13] <sup>2</sup>	Recessed equipment installed in building envelope assemblies does not compress the adjacent insulation.			<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
5.8.1.7.1 [IN15] <sup>2</sup>	Attics and mechanical rooms have insulation protected where adjacent to attic or equipment access.			<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met. <b>Location on plans/spec:</b> NA

1 High Impact (Tier 1)	2 Medium Impact (Tier 2)	3 Low Impact (Tier 3)
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Section # & Req.ID	Insulation Inspection	Plans Verified Value	Field Verified Value	Complies?	Comments/Assumptions
5.8.1.7.2 [IN16] <sup>2</sup>	Foundation vents do not interfere with insulation.			<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
5.8.1.8 [IN17] <sup>3</sup>	Insulation intended to meet the roof insulation requirements cannot be installed on top of a suspended ceiling. Mark this requirement compliant if insulation is installed accordingly.			<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met. <b>Location on plans/spec:</b> NA

**Additional Comments/Assumptions:**

1	High Impact (Tier 1)	2	Medium Impact (Tier 2)	3	Low Impact (Tier 3)
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Section # & Req.ID	Final Inspection	Complies?	Comments/Assumptions
5.4.3.3 [FI1] <sup>1</sup>	Weatherseals installed on all loading dock cargo doors in Climate Zones 4-8.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	<b>Exception:</b> Requirement does not apply.
6.4.3.1.2 [FI3] <sup>3</sup>	Thermostatic controls have a 5 °F deadband.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	<b>Exception:</b> Thermostats requiring manual changeover between heating and cooling.
6.4.3.2 [FI20] <sup>3</sup>	Temperature controls have setpoint overlap restrictions.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met. <b>Location on plans/spec:</b> NA
6.4.3.3.1 [FI21] <sup>3</sup>	HVAC systems equipped with at least one automatic shutdown control.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	<b>Exception:</b> Systems with capacity 15,000 Btu/h and with manual controls. <b>Location on plans/spec:</b> A3
6.4.3.3.2 [FI22] <sup>3</sup>	Setback controls allow automatic restart and temporary operation as required for maintenance.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	<b>Exception:</b> Systems with capacity 15,000 Btu/h and with manual controls. <b>Location on plans/spec:</b> A3
6.4.3.6 [FI6] <sup>3</sup>	When humidification and dehumidification are provided to a zone, simultaneous operation is prohibited. Humidity control prohibits the use of fossil fuel or electricity to produce RH > 30% in the warmest zone humidified and RH < 60% in the coldest zone dehumidified.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met. <b>Location on plans/spec:</b> NA
6.7.2.1 [FI7] <sup>3</sup>	Furnished HVAC as-built drawings submitted within 90 days of system acceptance.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
6.7.2.2 [FI8] <sup>3</sup>	Furnished O&M manuals for HVAC systems within 90 days of system acceptance.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
6.7.2.3 [FI9] <sup>1</sup>	An air and/or hydronic system balancing report is provided for HVAC systems serving zones >5,000 ft <sup>2</sup> of conditioned area.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	<b>Exception:</b> Requirement does not apply.
6.7.2.4 [FI10] <sup>1</sup>	HVAC control systems have been tested to ensure proper operation, calibration and adjustment of controls.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met. <b>Location on plans/spec:</b> A3
8.7.1 [FI16] <sup>3</sup>	Furnished as-built drawings for electric power systems within 30 days of system acceptance.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
8.7.2 [FI17] <sup>3</sup>	Furnished O&M instructions for systems and equipment to the building owner or designated representative.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.

1 High Impact (Tier 1)    2 Medium Impact (Tier 2)    3 Low Impact (Tier 3)

Section # & Req.ID	Final Inspection	Complies?	Comments/Assumptions
9.2.2.3 [FI18] <sup>1</sup>	Interior installed lamp and fixture lighting power is consistent with what is shown on the approved lighting plans, demonstrating proposed watts are less than or equal to allowed watts.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	See the Interior Lighting fixture schedule for values.
9.4.2 [FI19] <sup>1</sup>	Exterior lighting power is consistent with what is shown on the approved lighting plans, demonstrating proposed watts are less than or equal to allowed watts.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	See the Exterior Lighting fixture schedule for values.
9.4.4 [FI20] <sup>1</sup>	At least 75% of all permanently installed lighting fixtures in dwelling units have $\geq 55$ lm/W efficacy or a $\geq 45$ lm/W total luminaire efficacy.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	<b>Exception:</b> Requirement does not apply.
10.4.3 [FI24] <sup>2</sup>	Elevators are designed with the proper lighting, ventilation power, and standby mode.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	<b>Exception:</b> Requirement does not apply.

**Additional Comments/Assumptions:**

1 High Impact (Tier 1)	2 Medium Impact (Tier 2)	3 Low Impact (Tier 3)
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Originator: L. R. Lonbeck  
Date: 12-26-22  
Checker: XXXX  
Date: XXXX

Subject \_\_\_\_\_  
          Design Review  
          \_\_\_\_\_

Calc #: 22-143  
Rev #: 0  
Project: 22-143  
Sheet 1 of 10

**Rental Shop Building Review  
for  
W.A. Stevens Construction  
Lot 7, Cottage Grove Industrial Park  
Cottage Grove, OR**



EXPIRES 12-31-20 24

Originator: L.R. Lonbeck  
 Date: 12-26-22  
 Checker: XXXX  
 Date: XXXX

Subject \_\_\_\_\_  
Design Review  
 \_\_\_\_\_

Calc #: 22-143  
 Rev #: 0  
 Project: 22-143  
 Sheet 2 of 10

**Units**

kips := 1000·lbf      k := 1000·lbf

**Purpose:** Provide commercial design review for W.A. Stevens Construction at Lot 7, Cottage Grove Industrial Park, Cottage Grove, OR.

**References:**

1. OSSC, 2019
2. AISI 2016
3. ASCE 7-16
4. ACI 318-19
5. Design provided by Geomax, Inc.

**Loads**

**Dead Load**

- Roof framing  $d_{rf} := 5 \cdot \text{psf}$
- Wal framing  $d_w := 5 \cdot \text{psf}$
- Floor Framing  $d_f := 0 \cdot \text{psf}$

**Live Load**

- Roof  $L_r := 20 \cdot \text{psf}$
- Floor  $L_f := 250 \cdot \text{psf}$  or  $L_{cf} := 3000 \cdot \text{lbf}$
- Deck  $L_d := 0 \cdot \text{psf}$

**Approx. Avg. Foot Print Dimensions (Addition Only)**

$L_{\text{bldg}} := 240 \cdot \text{ft}$        $B_{\text{bldg}} := 68 \cdot \text{ft}$

**Approx. Building Floor Envelope**

$A_{\text{floor}} := L_{\text{bldg}} \cdot B_{\text{bldg}} - (20 \cdot \text{ft} \cdot 30 \cdot \text{ft})$        $A_{\text{floor}} = 15720 \text{ft}^2$

**Approx. Avg. Wall Elevation (Eave Ht.)**

$h_{\text{wall}} := 16.17 \text{ft}$

**Roof Pitch (Varies)**

$\text{pitch} := \frac{1}{12}$        $\theta_{\text{roof}} := \text{atan}(\text{pitch})$        $\theta_{\text{roof}} = 4.76 \cdot \text{deg}$

**Roof Height (above eave)**

$\Delta h_{\text{roof}} := \frac{B_{\text{bldg}}}{2} \cdot \text{pitch}$        $\Delta h_{\text{roof}} = 2.83 \text{ft}$

**Approx. Roof Elevation (above finish grade)**

$h_{\text{roof}} := h_{\text{wall}} + \Delta h_{\text{roof}}$        $h_{\text{roof}} = 19.00 \text{ft}$

**Soils Data**

- Soil type:  $S_D$  (Assumed)
- Allow. bearing pressure:  $q_s := 1500 \text{psf}$
- Frost depth: 12"

**Note:** If soft, unstable soils or water table are encountered during excavation, please contact the engineer of record immediately. Work done without the engineer's written approval is the contractor's responsibility.

# Rodgers Mtn. Consultants, LLC Calculation Sheet

Originator: L.R. Lonbeck  
 Date: 12-26-22  
 Checker: XXXX  
 Date: XXXX

Subject \_\_\_\_\_  
Design Review  
 \_\_\_\_\_

Calc #: 22-143  
 Rev #: 0  
 Project: 22-143  
 Sheet 3 of 10

**Snow Load (Ref. 3.)**  $p_g := 15\text{-psf}$       **Min. snow load**  $p_{\text{min}} := 20\text{-psf}$   
**Exp. B factor**  $C_e := 1$       **Thermal factor**  $C_t := 1$       **Slope factor**  $C_s := 1$       **Importance factor**  $I_s := 1$   
**Roof snow load**  $p_f := 0.7 \cdot C_e \cdot C_t \cdot I_s \cdot p_g$        $p_f = 10.5\text{-psf}$       **Sloped snow load**  $p_s := p_f \cdot C_s$        $p_s = 10.5\text{-psf}$   
**Unbalanced load**  $p_{s'} := I_s \cdot p_g$        $p_{s'} = 15\text{-psf}$       **Leeward side only**      **Use min. snow load for design.**

## Seismic Load

Ref. ASCE Design Hazards Report. Ref. OSSC Table 1613.2.5(1),  $S_{DS} = 0.50g \leq S_{DS}$  for category D.

- **Importance**  $I_e := 1.0$
- **Spectral Accel.**  $S_s := 0.671$
- **Spectral Accel.**  $S_1 := 0.392$
- **Design Category D**
- **Site Coeff.**  $F_a := 1.264$
- **Site Coeff.**  $F_v := 0$
- **Seismic acceleration for site area:**
- $S_{MS} := F_a \cdot S_s$        $S_{MS} = 0.848$
- $S_{M1} := F_v \cdot S_1$        $S_{M1} = 0$

Therefore  $S_{DS} := \frac{2 \cdot S_{MS}}{3}$        $S_{DS} = 0.565$       and       $S_{D1} := \frac{2 \cdot S_{M1}}{3}$        $S_{D1} = 0$       **Ref. 3, Sect. 11.6**  $S_{DS} \geq 0.5g$ ,  $S_{D1} \geq$

0.20g Use site category D.

**Response Mod. Coeff.**  $R_e := 6.5$  or  $R_{e2} := 2.0$       **Seismic Accel.**  $v_e := \frac{1.2 \cdot S_{DS}}{R_e}$        $v_e = 0.104$

**Response coeff.**  $C_{s1} := \frac{S_{DS}}{\left(\frac{R_e}{I_e}\right)}$        $C_{s1} = 0.087$       or       $C_{s2} := \frac{S_{DS}}{\frac{R_{e2}}{I_e}}$        $C_{s2} = 0.2827$

**Approx. Building Wt.**  $W_{\text{bldg}} := 182.79\text{k}$

**Approx. Base Shear**  $V_e := v_e \cdot W_{\text{bldg}}$        $V_e = 19.1\text{k}$       or       $V_c := C_{s1} \cdot W_{\text{bldg}}$        $V_c = 15.9\text{k}$



# Rodgers Mtn. Consultants, LLC Calculation Sheet

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 Date: XXXX

Subject \_\_\_\_\_  
 Design Review \_\_\_\_\_

Calc #: 22-143  
 Rev #: 0  
 Project: 22-143  
 Sheet 4 of 10

**Wind Load** Basic Wind Speed  $V_u := 120 \text{ mph}$  Therefore  $V_{asd} := V_u \cdot \sqrt{0.6}$   $V_{asd} = 93 \text{ mph}$  Say  $V_w := 93 \text{ mph}$   
 Exposure "B", Importance Cat.  $I_w := 1.0$  Max. Avg. structure ht.  $\approx 17'-6"$

Method 2 (Ref. 3, Sect. 26 & 28)

Exposure	Category	Type	V (mph)	$K_z$	$K_{zt}$	$K_d$	$K_e$	I	$q_h$ (psf)
B	II	Enclosed	93	0.7	1	0.85	1	1	13.2
$GC_{pi}$	0.18	-0.18							
<b>Design Pressure in Trans. Direction</b>				<b>Design Pressure in Long. Direction</b>					
Roof Angle = 4.76 deg.				Roof Angle = 0 deg.					
Surface	$GC_{pf}$	Design Pressure		Surface	$GC_{pf}$	Design Pressure			
		+ $GC_{pi}$	- $GC_{pi}$			+ $GC_{pi}$	- $GC_{pi}$		
1	0.4	2.90	7.64	1	-0.45	-8.30	-3.56		
2	-0.69	-11.46	-6.72	2	-0.69	-11.46	-6.72		
3	-0.37	-7.25	-2.50	3	-0.37	-7.25	-2.50		
4	-0.29	-6.19	-1.45	4	-0.45	-8.30	-3.56		
1E	0.61	5.66	10.41	5	0.4	2.90	7.64		
2E	-1.07	-16.47	-11.72	6	-0.29	-6.19	-1.45		
3E	-0.53	-9.35	-4.61	1E	-0.48	-8.69	-3.95		
4E	-0.43	-8.04	-3.29	2E	-1.07	-16.47	-11.72		
				3E	-0.53	-9.35	-4.61		
				4E	-0.48	-8.69	-3.95		
				5E	0.61	5.66	10.41		
				6E	-0.43	-8.04	-3.29		

Effective bldg height  $h_{eff} := h_{wall} + \frac{\Delta h_{roof}}{2}$   $h_{eff} = 17.6 \text{ ft}$

Use min. wind load  $w_{min} := 16 \text{ psf}$

Approx. transverse base shear  $V_{ew} := w_{min} \cdot L_{bldg} \cdot h_{eff}$   $V_{ew} = 67.5 \text{ k}$  (Trans. Dir.)

Approx. longitudinal base shear  $V_{ns} := w_{min} \cdot B_{bldg} \cdot h_{eff}$   $V_{ns} = 19.1 \text{ k}$  (Long. Dir.)

Wind load governs lateral

Min. wall anchorage at top of foundation (Based on wind load)

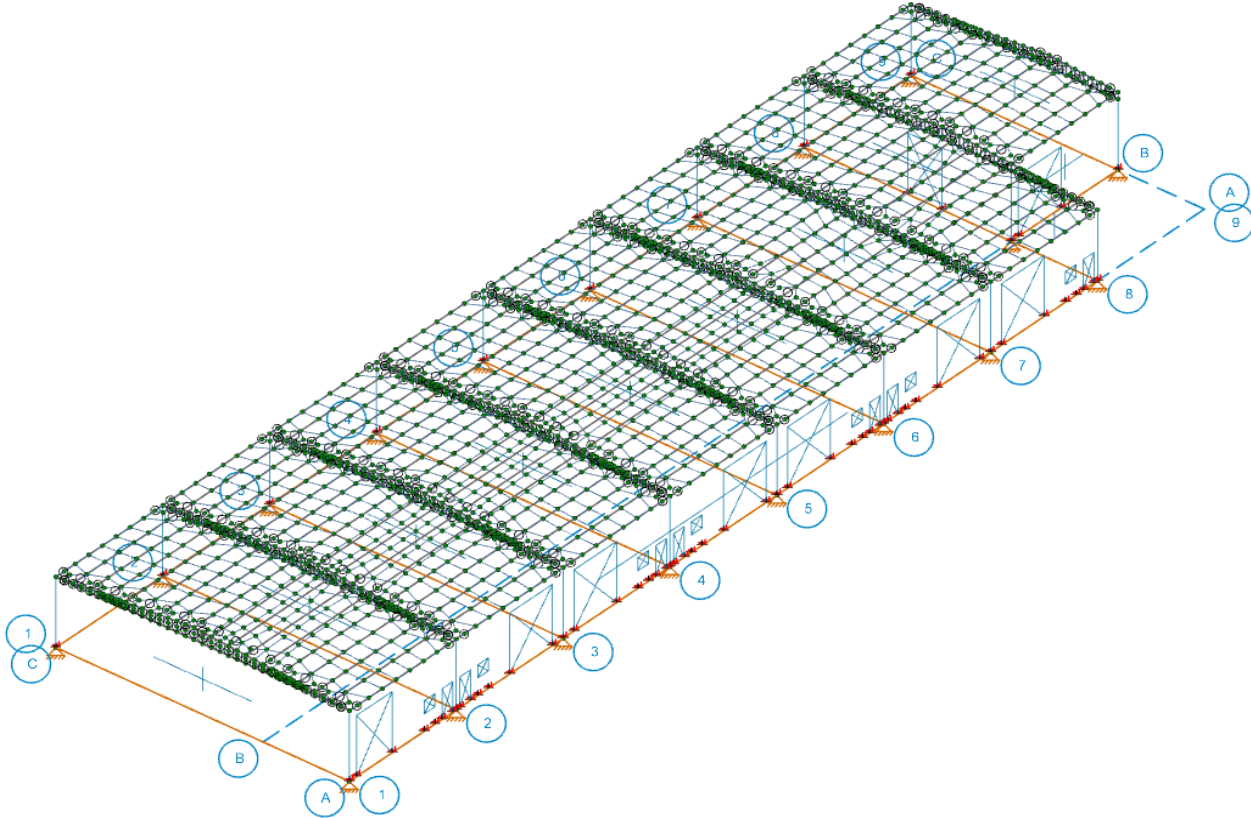
Approx. max. trans. shear per foot of ext. wall  $v_{bt} := \frac{V_{ew}}{8.7 \cdot B_{bldg}}$   $v_{bt} = 114.2 \frac{1}{ft} \cdot \text{lb/ft}$  Use 5/8"  $\phi$  Titen HD bolts, w/4"

min. embedment, at 6'-0" o.c. max. or 1/2"  $\phi$  Titen HD bolts, w/4" min. embedment at 6'-0" o.c. max. Conserve.

Originator: L. R. Lonbeck  
 Date: 12-26-22  
 Checker: XXXX  
 Date: XXXX

Subject \_\_\_\_\_  
Design Review

Calc #: 22-143  
 Rev #: 0  
 Project: 22-143  
 Sheet 5 of 10



Act  
Go to

Determine Approx. Lateral Forces

Wall	Level	Wind Dir.	Unit Load (psf)	Trib. Length (ft)	Trib. Ht. (ft)	No. Walls	Load per Wall (lbf)	Wall Length (ft)	Wall Shear (lbf/ft)	No. Brace Panels	Load Per Panel (lbf)	Comments
1st Floor												
W	1	Trans	16	15	9.5	1	2280.0	68	33.5	1	2280.0	
N		Long	16	34	9.5		5168.0	240	21.5	1	5168.0	
E		Trans	16	15	9.5		2280.0	48	47.5	1	2280.0	
E		Trans	16	30	9.5		4560.0	20	228.0	1	4560.0	Grid 8
S		Long	16	34	9.5		5168.0	210	24.6	10	516.8	Grid A
S		Long	16	34	9.5		5168.0	30	172.3	1	5168.0	Grid B
Int		Trans	16	30	9.5		4560	68	67.1	1	4560	Grids 2-7
Int/E		Trans	16	30	9.5		4560	68	67.1	3	1520	Grid 8

# Rodgers Mtn. Consultants, LLC Calculation Sheet

Originator: L.R. Lonbeck  
 Date: 12-26-22  
 Checker: XXXX  
 Date: XXXX

Subject \_\_\_\_\_  
 Design Review \_\_\_\_\_

Calc #: 22-143  
 Rev #: 0  
 Project: 22-143  
 Sheet 6 of 10

## Check Segmented Panels

Wall/ Grid	Wall Lgth (ft)	Net Lgth $\Sigma L_i$ (ft)	%	Panel Ht. (ft)	Avg. Panel Width (ft)	h/w	Wall DL (psf)	Panel Wt. (lbf)	Shear Force V (lbf)	No. of Panels	Uplift T (lbf)	Unit Shear Force v (lbf/ft)	Wall Type	Anchor
Main Floor														
W/1	68	68	100	16.17	68	0.24	15	16493	2280.0	1	-4406	33.5	SW-1	O
N/C	240	240	100	16.33	240	0.07		58788	5168	1	-17285	21.5	SW-1	O
E/9	48	48	100	16.17	48	0.34		11642	2280	1	-2725	47.5	SW-1	O
E/8	20	20	100	16.17	20	0.81		4851	2281	1	389	114.1	SW-1	A
S/A	210	61	29	16	6.1	2.62		1464	5168	7	1497	121.0	SW-1	A
S/B	30	16	53	17	16	1.06		4080	5168	1	4267	323.0	SW-1	C
Int/2-7	68	68	100	16.17	68	0.24		16493	4560	1	-3864	67.1	SW-2	O
Int/8	48	40	83	16.17	20	0.81		4851	4560	2	388	114	SW-1	A

## CFS Shear Wall Schedule

Type	Sheathing Type	Nailing		Blocking	Sill Anchorage			Capacity		Notes
		Min. Screw	Spacing (in)		Size (in)	Space (ft-in)	Max. End (in)	Seismic (plf)	Wind (plf)	
SW-1	0.018 Steel + 1/2" Gyp	#8	6	Y	1/2	5'-0"	12	203	252	
SW-2	1/2" Gyp. Ea. Face	#8	7	Y	1/2	6'-0"	12	232	232	

## CFS Hold-Down Schedule

Symbol	Bracket	Stud (mil)	Connectors	SSTB	Emb't (in)	Capacity (lbf)	Anchorage			Min. Stem Wall (in)
							Titen HD	Emb't (in)	Capacity (lbf)	
A	S/HDU4	2-33	#14	SSTB16	12 5/8	2320	THD62600H	4	2320	6
B		2-43		SSTB20	16 5/8	3825	THD62800H	5.5	3825	6
C	S/HDU6	2-33	#14	SSTB24	20 5/8	4895	THD62800H	5.5	4895	6
D		2-43		SSTB28	24 7/8	6125	THD75812H	6.25	6125	8
E	S/HDU9	2-33	#14	SSTB28	24 7/8	6965	THD75812H	6.25	6965	8
O	No hold-down required									

### Notes:

1. Stud spacing shall not exceed 24" o.c.
2. Where wall intersections allow for only 1 hold-down, provide the larger hold-down specified. Insure that sheathing is properly connected to both walls at intersection.
3. All Simpson products shall be installed per manufacturer's recommendations.

# Rodgers Mtn. Consultants, LLC Calculation Sheet

Originator: L.R. Lonbeck  
 Date: 12-26-22  
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 Date: XXXX

Subject \_\_\_\_\_  
 Design Review \_\_\_\_\_

Calc #: 22-143  
 Rev #: 0  
 Project: 22-143  
 Sheet 7 of 10

## RISA Wall Check

Wall Panel / Grid	Wall Region	Shear Panel Label	Stud Size	Space (in)	Chord Size	Shear Force [k/ft]	Hold-Down Force (k)	Hold-Down
WP1/1	R1	0.018_#8@6/12_33	600S200-43	24	2-600S200-43-FF	0.158	2.924	B
WP2/2	R1	1/2_GYP@8/12_33	2-600S200-43-BB	24	2-600S200-43-FF	0.079	NC	O
WP3/3	R1	1/2_GYP@8/12_33	2-600S200-43-BB	24	2-600S200-43-FF	0.105	NC	O
WP4/5	R1	1/2_GYP@8/12_33	2-600S200-43-BB	24	2-600S200-43-FF	0.102	NC	O
WP5/6	R1	1/2_GYP@8/12_33	2-600S200-43-BB	24	2-600S200-43-FF	0.114	NC	O
WP6/6	R1	1/2_GYP@8/12_33	2-600S200-43-BB	24	2-600S200-43-FF	0.101	NC	O
WP7/7	R1	1/2_GYP@8/12_33	2-600S200-43-BB	24	2-600S200-43-FF	0.091	NC	O
WP8/9	R1	0.018_#8@6/12_33	600S200-43	24	2-600S200-43-FF	0.182	2.645	B
WP9/B	R1	0.033_#8@2/12_54	2-600S200-54-BB	12	2-600S200-54-FF	0.819	4.82	C
	R3	0.033_#8@2/12_54	2-600S200-54-BB	12	2-600S200-54-FF	0	NC	O
WP10/8	R1	0.018_#8@6/12_33	600S200-43	24	2-600S200-43-FF	0.07	0.321	A
WP11/8	R1	1/2_GYP@4/4_33	2-600S200-43-BB	24	2-600S200-43-FF	0.224	NC	O
	R3	1/2_GYP@4/4_33	2-600S200-43-BB	24	2-600S200-43-FF	0.31	1.886	O
WP12/C	R1	0.018_#8@6/12_33	600S200-43	24	2-600S200-43-FF	0.044	NC	O
WP13/A	R6	0.030_#8@4/12_33_TALL	2-600S200-43-BB	24	2-600S200-43-FF	0.175	1.949	A
	R8	0.030_#8@4/12_33_TALL	2-600S200-43-BB	24	2-600S200-43-FF	0.128	1.477	A
	R10	0.030_#8@4/12_33_TALL	2-600S200-43-BB	24	2-600S200-43-FF	0.192	0.442	A
	R20	0.030_#8@4/12_33_TALL	2-600S200-43-BB	24	2-600S200-43-FF	0.114	0.417	A
	R22	0.030_#8@4/12_33_TALL	2-600S200-43-BB	24	2-600S200-43-FF	0.034	0.078	A
	R24	0.030_#8@4/12_33_TALL	2-600S200-43-BB	24	2-600S200-43-FF	0.166	1.124	A
	R34	0.030_#8@4/12_33_TALL	2-600S200-43-BB	24	2-600S200-43-FF	0.266	1.274	A
	R36	0.030_#8@4/12_33_TALL	2-600S200-43-BB	24	2-600S200-43-FF	0.206	2.641	B
	R38	0.030_#8@4/12_33_TALL	2-600S200-43-BB	24	2-600S200-43-FF	0.332	3.552	C
	R50	0.030_#8@4/12_33_TALL	2-600S200-43-BB	24	2-600S200-43-FF	0	1.804	B
	R48	0.030_#8@4/12_33_TALL	2-600S200-43-BB	24	2-600S200-43-FF	0.458	4.584	C

### Notes:

- The analysis software does not currently allow for sheathing on both faces of walls. Hand check of WP11 indicates the shear check is acceptable.
- Provide 1 additional stud at each end of Region 1 at WP9 to strengthen the panel chords.
- Provide 1400S350-97 roof purlins @ max. 48" o.c.
- Provide wall studs as noted above.

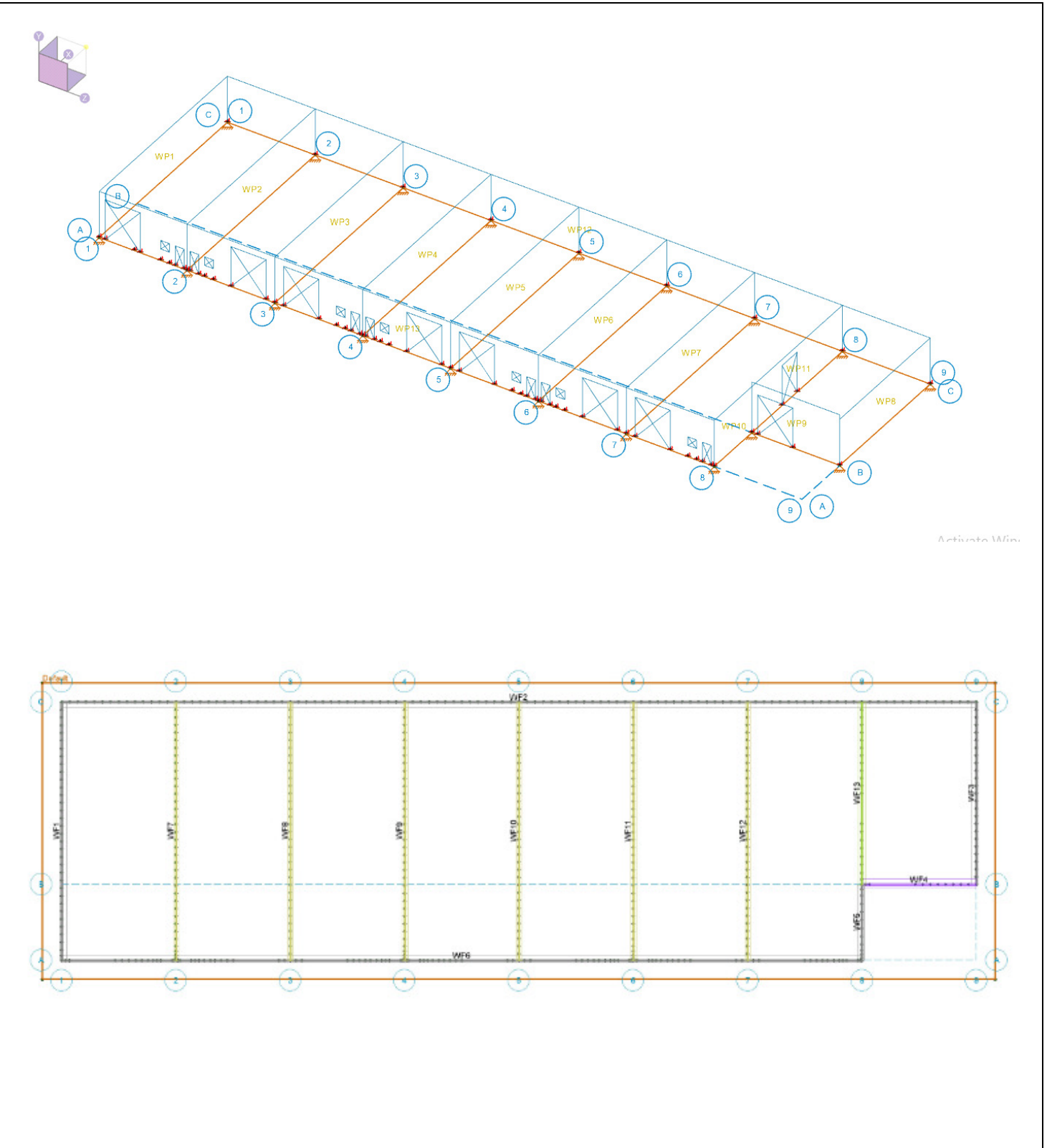
### Check Purlin Connection

Max. shear per purlin  $\approx$  2.0 k, therefore provide min. 6 #12 screws ea. end.

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Date: 12-26-22  
Checker: XXXX  
Date: XXXX

Subject \_\_\_\_\_  
Design Review \_\_\_\_\_

Calc #: 22-143  
Rev #: 0  
Project: 22-143  
Sheet 8 of 10

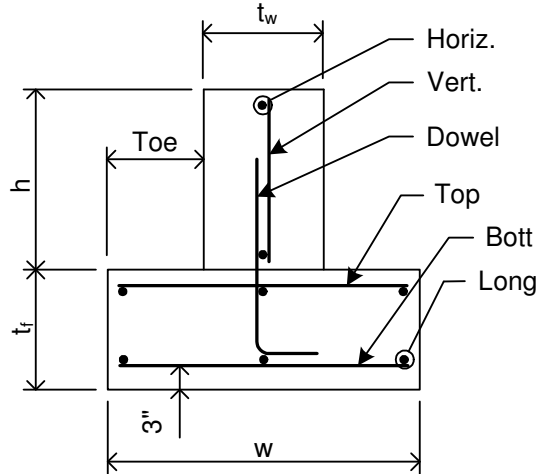


Activate Win

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Subject \_\_\_\_\_  
Design Review

Calc #: 22-143  
 Rev #: 0  
 Project: 22-143  
 Sheet 9 of 10



**Typical Wall Footing**  
 Wall is Optional

Wall Footing Details														
Sym	Loc/ Grid	Footing				Reinforcing				Wall		Reinforcing		Comments
		w (ft)	Toe (ft)	Heel (ft)	t <sub>f</sub> (in)	Top	Bott	Long	Dowel	h (in)	t <sub>w</sub> (in)	Vert	Horiz	
WF1	1	1.75	0.25	1.00	14		#4@7in	#4@7in		0	6			
WF2	C	1.75	0.25	1.00	14		#4@7in	#4@7in		0	6			
WF3	9	1.75	0.25	1.00	14		#4@7in	#4@7in		0	6			
WF4	B	2.25	0.50	1.25	14		#4@7in	#4@7in		0	6			
WF5	8	1.75	0.25	1.00	14		#4@7in	#4@7in		0	6			
WF6	A	1.75	0.25	1.00	14		#4@7in	#4@7in		0	6			
WF7	2	1.5	0.5	0.5	8		#4@12in	#4@8in		0	6			
WF8	3	1.5	0.5	0.5	8		#4@12in	#4@8in		0	6			
WF9	4	1.5	0.5	0.5	8		#4@12in	#4@8in		0	6			
WF10	5	1.5	0.5	0.5	8		#4@12in	#4@8in		0	6			
WF11	6	1.5	0.5	0.5	8		#4@12in	#4@8in		0	6			
WF12	7	1.5	0.5	0.5	8		#4@12in	#4@8in		0	6			
WF13	8	2	0.75	0.75	8		#4@12in	#4@8in		0	6			

**Notes**

1. Provide min. 3000 psi concrete. Design is based on 2500 psi concrete. No special inspection required.
2. All foundation reinforcing steel shall be ASTM A615, Grade 60. Slab reinforcing steel may be ASTM A82 welded wire fabric.

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Date: 12-26-22  
Checker: XXXX  
Date: XXXX

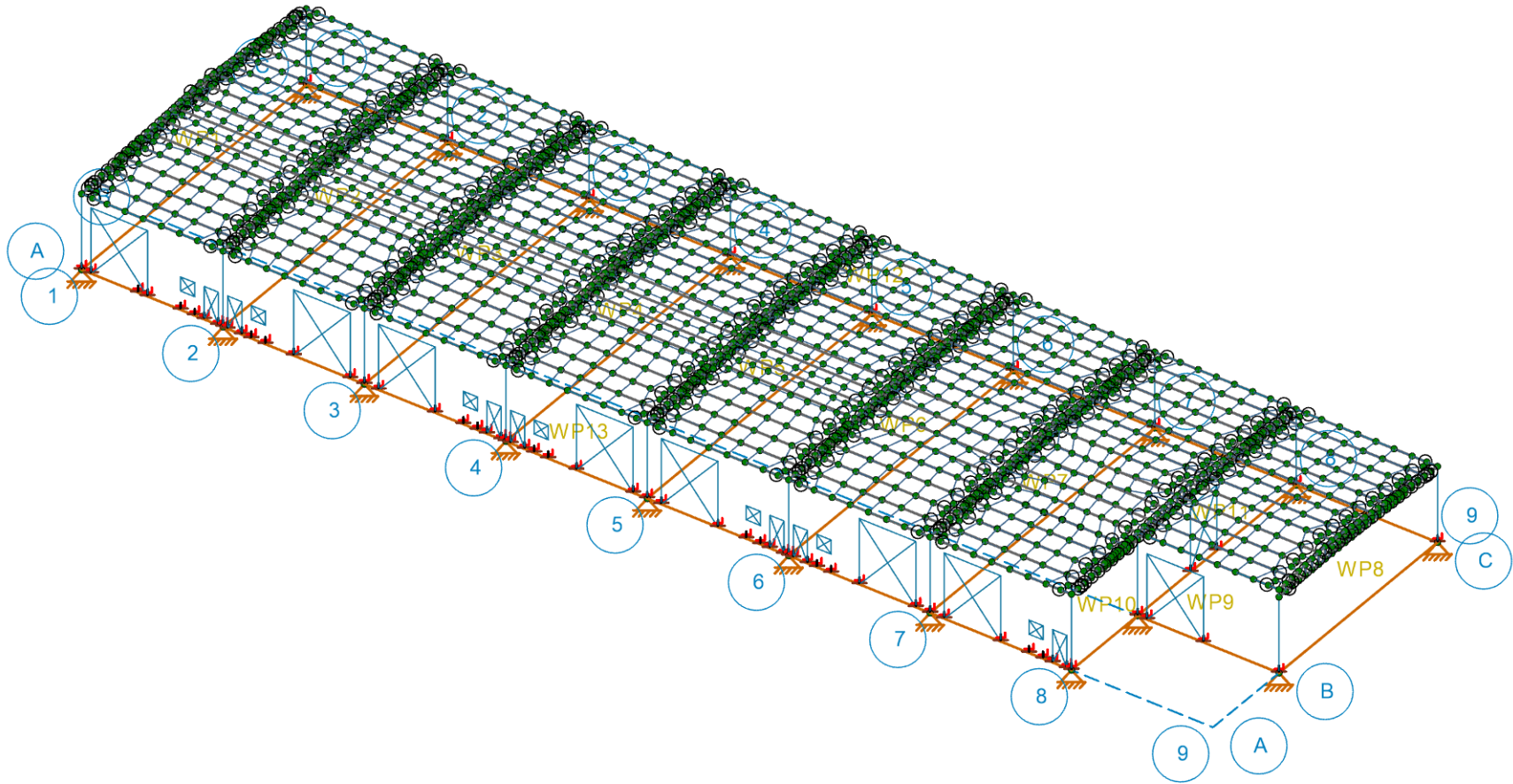
Subject \_\_\_\_\_  
Design Review  
\_\_\_\_\_

Calc #: 22-143  
Rev #: 0  
Project: 22-143  
Sheet 10 of 10

**Floor Slab Design**

4" slab on grade is based on nominal heavy industrial loading. Provide min. #4 bar @ 18" e/w, or 6x6xW4.5xW4.5 welded wire fabric.

Optional: 6" slab on grade is based on nominal heavy industrial loading plus 10k forklift traffic. Provide min. #4 bar @ 18" e/w, or 6x6xW6.5xW6.5 welded wire fabric.



Envelope Only Solution



Rodgers Mountain Consultants, LLC  
R. Lonbeck  
22-143

Lot 7, cottage Grove Industrial Park

SK-1

Jun 05, 2023 at 11:23 AM

Lot 7, Cottage Grove Industrial Park - 2....



**Cold Formed Steel Properties**

	Label	E [ksi]	G [ksi]	Nu	Therm. Coeff. [1e <sup>5</sup> F <sup>-1</sup> ]	Density [k/ft <sup>3</sup> ]	Yield [ksi]	Fu [ksi]
1	A653 SS Gr33	29500	11346	0.3	0.65	0.49	33	45
2	A653 SS Gr50/1	29500	11346	0.3	0.65	0.49	50	65

**Cold Formed Steel Section Sets**

	Label	Shape	Type	Design List	Material	Design Rule	Area [in <sup>2</sup> ]	Iyy [in <sup>4</sup> ]	Izz [in <sup>4</sup> ]	J [in <sup>4</sup> ]
1	Top Track	600T200-43	Beam	CU	A653 SS Gr33	Top Track	0.451	0.163	2.49	0.000306
2	Load Track	600T200-33	Beam	CU	A653 SS Gr33	Load Track	0.346	0.126	1.91	0.000138
3	Purlin	1400S350-97	Beam	CS	A653 SS Gr50/1	Purlin	2.262	3.296	62.51	0.008
4	Ridge Purlin	2-1400S350-97-BB	Beam	CS B-to-B	A653 SS Gr50/1	Ridge Purlin	4.524	9.363	125.02	0.016
5	Stud	600S200-33	Column	CS	A653 SS Gr33	Stud	0.379	0.209	2.08	0.000151
6	Dbl Stud	2-600S200-33-BB	Column	CS B-to-B	A653 SS Gr33	Dbl Stud	0.758	0.668	4.16	0.000302

**Node Coordinates**

	Label	X [ft]	Y [ft]	Z [ft]	Detach From Diaphragm
1	N1	0	0	0	
2	N2	68	0	0	
3	N3	0	16.17	0	
4	N4	68	16.17	0	
5	N5	0	0	30	
6	N6	68	0	30	
7	N7	68	16.17	30	
8	N8	0	16.17	30	
9	N9	0	0	60	
10	N10	0	16.17	60	
11	N11	68	16.17	60	
12	N12	68	0	60	
13	N13	0	0	90	
14	N14	0	16.17	90	
15	N15	68	16.17	90	
16	N16	68	0	90	
17	N17	0	0	120	
18	N18	0	16.17	120	
19	N19	68	16.17	120	
20	N20	68	0	120	
21	N21	0	0	150	
22	N22	0	16.17	150	
23	N23	68	16.17	150	
24	N24	68	0	150	
25	N25	0	0	180	
26	N26	0	16.17	180	
27	N27	68	16.17	180	
28	N28	68	0	180	
29	N29	0	0	210	
30	N30	0	16.17	210	
31	N31	68	16.17	210	
32	N32	68	0	210	
33	N33	20	0	240	
34	N34	20	16.17	240	
35	N35	68	16.17	240	
36	N36	68	0	240	
37	N37	20	16.17	210	
38	N38	20	0	210	

**Node Coordinates (Continued)**

	Label	X [ft]	Y [ft]	Z [ft]	Detach From Diaphragm
39	N39	36	19	60	
40	N40	36	19	30	
41	N41	36	19	180	
42	N42	36	19	0	
43	N43	36	19	90	
44	N44	36	19	120	
45	N45	36	19	150	
46	N46	36	19	210	
47	N47	36	19	240	
48	N48	2	16.17	0	
49	N49	4	16.17	0	
50	N50	6	16.17	0	
51	N51	8	16.17	0	
52	N52	10	16.17	0	
53	N53	12	16.17	0	
54	N54	14	16.17	0	
55	N55	16	16.17	0	
56	N56	18	16.17	0	
57	N57	20	16.17	0	
58	N58	22	16.17	0	
59	N59	24	16.17	0	
60	N60	26	16.17	0	
61	N61	28	16.17	0	
62	N62	30	16.17	0	
63	N63	32	16.17	0	
64	N64	34	16.17	0	
65	N65	36	16.17	0	
66	N66	38	16.17	0	
67	N67	40	16.17	0	
68	N68	42	16.17	0	
69	N69	44	16.17	0	
70	N70	46	16.17	0	
71	N71	48	16.17	0	
72	N72	50	16.17	0	
73	N73	52	16.17	0	
74	N74	54	16.17	0	
75	N75	56	16.17	0	
76	N76	58	16.17	0	
77	N77	60	16.17	0	
78	N78	62	16.17	0	
79	N79	64	16.17	0	
80	N80	66	16.17	0	
81	N81	2	16.327222	0	
82	N82	6	16.641667	0	
83	N83	10	16.956111	0	
84	N84	14	17.270556	0	
85	N85	18	17.585	0	
86	N86	22	17.899444	0	
87	N87	26	18.213889	0	
88	N88	30	18.528333	0	
89	N89	34	18.842778	0	
90	N90	38	18.823125	0	
91	N91	42	18.469375	0	
92	N92	46	18.115625	0	
93	N93	50	17.761875	0	

**Node Coordinates (Continued)**

	Label	X [ft]	Y [ft]	Z [ft]	Detach From Diaphragm
94	N94	54	17.408125	0	
95	N95	58	17.054375	0	
96	N96	62	16.700625	0	
97	N97	66	16.346875	0	
98	N98	4	16.484444	0	
99	N99	8	16.798889	0	
100	N100	12	17.113333	0	
101	N101	16	17.427778	0	
102	N102	20	17.742222	0	
103	N103	24	18.056667	0	
104	N104	28	18.371111	0	
105	N105	32	18.685556	0	
106	N106	40	18.64625	0	
107	N107	44	18.2925	0	
108	N108	48	17.93875	0	
109	N109	52	17.585	0	
110	N110	56	17.23125	0	
111	N111	60	16.8775	0	
112	N112	64	16.52375	0	
113	N113	28	16.17	30	
114	N114	22	16.17	30	
115	N115	18	16.17	30	
116	N116	56	17.23125	30	
117	N117	14	16.17	30	
118	N118	8	16.798889	30	
119	N119	8	16.17	30	
120	N120	34	16.17	30	
121	N121	2	16.17	30	
122	N122	54	17.408125	30	
123	N123	16	16.17	30	
124	N124	42	16.17	30	
125	N125	4	16.17	30	
126	N126	32	16.17	30	
127	N127	26	16.17	30	
128	N128	20	16.17	30	
129	N129	6	16.17	30	
130	N130	10	16.17	30	
131	N131	12	16.17	30	
132	N132	24	16.17	30	
133	N133	30	16.17	30	
134	N134	36	16.17	30	
135	N135	12	17.113333	30	
136	N136	6	16.641667	30	
137	N137	38	16.17	30	
138	N138	40	16.17	30	
139	N139	44	16.17	30	
140	N140	46	16.17	30	
141	N141	48	16.17	30	
142	N142	50	16.17	30	
143	N143	52	16.17	30	
144	N144	54	16.17	30	
145	N145	56	16.17	30	
146	N146	58	16.17	30	
147	N147	60	16.17	30	
148	N148	62	16.17	30	

**Node Coordinates (Continued)**

	Label	X [ft]	Y [ft]	Z [ft]	Detach From Diaphragm
149	N149	64	16.17	30	
150	N150	66	16.17	30	
151	N151	22	17.899444	30	
152	N152	10	16.956111	30	
153	N153	34	18.842778	30	
154	N154	14	17.270556	30	
155	N155	2	16.327222	30	
156	N156	4	16.484444	30	
157	N157	16	17.427778	30	
158	N158	18	17.585	30	
159	N159	20	17.742222	30	
160	N160	24	18.056667	30	
161	N161	26	18.213889	30	
162	N162	28	18.371111	30	
163	N163	30	18.528333	30	
164	N164	32	18.685556	30	
165	N165	38	18.823125	30	
166	N166	40	18.64625	30	
167	N167	42	18.469375	30	
168	N168	44	18.2925	30	
169	N169	46	18.115625	30	
170	N170	48	17.93875	30	
171	N171	50	17.761875	30	
172	N172	52	17.585	30	
173	N173	58	17.054375	30	
174	N174	60	16.8775	30	
175	N175	62	16.700625	30	
176	N176	64	16.52375	30	
177	N177	66	16.346875	30	
178	N178	44	16.17	60	
179	N179	12	17.113333	60	
180	N180	30	18.528333	60	
181	N181	26	16.17	60	
182	N182	20	17.742222	60	
183	N183	24	16.17	60	
184	N184	42	16.17	60	
185	N185	56	16.17	60	
186	N186	54	17.408125	60	
187	N187	28	16.17	60	
188	N188	22	16.17	60	
189	N189	18	16.17	60	
190	N190	56	17.23125	60	
191	N191	58	16.17	60	
192	N192	14	16.17	60	
193	N193	8	16.798889	60	
194	N194	8	16.17	60	
195	N195	34	16.17	60	
196	N196	2	16.17	60	
197	N197	16	16.17	60	
198	N198	4	16.17	60	
199	N199	32	16.17	60	
200	N200	20	16.17	60	
201	N201	6	16.17	60	
202	N202	10	16.17	60	
203	N203	12	16.17	60	



**Node Coordinates (Continued)**

	Label	X [ft]	Y [ft]	Z [ft]	Detach From Diaphragm
204	N204	30	16.17	60	
205	N205	36	16.17	60	
206	N206	6	16.641667	60	
207	N207	48	17.93875	60	
208	N208	38	16.17	60	
209	N209	64	16.17	60	
210	N210	40	16.17	60	
211	N211	46	16.17	60	
212	N212	48	16.17	60	
213	N213	50	16.17	60	
214	N214	52	16.17	60	
215	N215	54	16.17	60	
216	N216	60	16.17	60	
217	N217	62	16.17	60	
218	N218	2	16.327222	60	
219	N219	66	16.17	60	
220	N220	22	17.899444	60	
221	N221	10	16.956111	60	
222	N222	34	18.842778	60	
223	N223	14	17.270556	60	
224	N224	4	16.484444	60	
225	N225	16	17.427778	60	
226	N226	18	17.585	60	
227	N227	24	18.056667	60	
228	N228	26	18.213889	60	
229	N229	28	18.371111	60	
230	N230	32	18.685556	60	
231	N231	38	18.823125	60	
232	N232	40	18.64625	60	
233	N233	42	18.469375	60	
234	N234	44	18.2925	60	
235	N235	46	18.115625	60	
236	N236	50	17.761875	60	
237	N237	52	17.585	60	
238	N238	58	17.054375	60	
239	N239	60	16.8775	60	
240	N240	62	16.700625	60	
241	N241	64	16.52375	60	
242	N242	66	16.346875	60	
243	N243	2	16.17	90	
244	N244	66	16.17	90	
245	N245	22	16.17	90	
246	N246	54	17.408125	90	
247	N247	24	18.056667	90	
248	N248	22	17.899444	90	
249	N249	48	17.93875	90	
250	N250	20	17.742222	90	
251	N251	52	17.585	90	
252	N252	38	16.17	90	
253	N253	64	16.17	90	
254	N254	48	16.17	90	
255	N255	62	16.700625	90	
256	N256	34	18.842778	90	
257	N257	14	16.17	90	
258	N258	8	16.798889	90	



**Node Coordinates (Continued)**

	Label	X [ft]	Y [ft]	Z [ft]	Detach From Diaphragm
259	N259	62	16.17	90	
260	N260	58	16.17	90	
261	N261	60	16.8775	90	
262	N262	44	16.17	90	
263	N263	12	17.113333	90	
264	N264	30	18.528333	90	
265	N265	26	16.17	90	
266	N266	24	16.17	90	
267	N267	42	16.17	90	
268	N268	56	16.17	90	
269	N269	28	16.17	90	
270	N270	18	16.17	90	
271	N271	56	17.23125	90	
272	N272	8	16.17	90	
273	N273	34	16.17	90	
274	N274	16	16.17	90	
275	N275	2	16.327222	90	
276	N276	4	16.17	90	
277	N277	32	16.17	90	
278	N278	20	16.17	90	
279	N279	6	16.17	90	
280	N280	10	16.17	90	
281	N281	12	16.17	90	
282	N282	30	16.17	90	
283	N283	36	16.17	90	
284	N284	6	16.641667	90	
285	N285	40	16.17	90	
286	N286	46	16.17	90	
287	N287	50	16.17	90	
288	N288	52	16.17	90	
289	N289	54	16.17	90	
290	N290	60	16.17	90	
291	N291	10	16.956111	90	
292	N292	14	17.270556	90	
293	N293	4	16.484444	90	
294	N294	16	17.427778	90	
295	N295	18	17.585	90	
296	N296	26	18.213889	90	
297	N297	28	18.371111	90	
298	N298	32	18.685556	90	
299	N299	38	18.823125	90	
300	N300	40	18.64625	90	
301	N301	42	18.469375	90	
302	N302	44	18.2925	90	
303	N303	46	18.115625	90	
304	N304	50	17.761875	90	
305	N305	58	17.054375	90	
306	N306	64	16.52375	90	
307	N307	66	16.346875	90	
308	N308	12	17.113333	120	
309	N309	40	16.17	120	
310	N310	30	18.528333	120	
311	N311	54	16.17	120	
312	N312	46	16.17	120	
313	N313	62	16.700625	120	

**Node Coordinates (Continued)**

	Label	X [ft]	Y [ft]	Z [ft]	Detach From Diaphragm
314	N314	16	16.17	120	
315	N315	40	18.64625	120	
316	N316	52	16.17	120	
317	N317	62	16.17	120	
318	N318	8	16.798889	120	
319	N319	26	16.17	120	
320	N320	26	18.213889	120	
321	N321	32	16.17	120	
322	N322	48	17.93875	120	
323	N323	44	16.17	120	
324	N324	38	18.823125	120	
325	N325	18	17.585	120	
326	N326	60	16.8775	120	
327	N327	28	16.17	120	
328	N328	56	17.23125	120	
329	N329	6	16.17	120	
330	N330	66	16.17	120	
331	N331	24	18.056667	120	
332	N332	10	16.17	120	
333	N333	52	17.585	120	
334	N334	64	16.52375	120	
335	N335	64	16.17	120	
336	N336	56	16.17	120	
337	N337	2	16.17	120	
338	N338	22	16.17	120	
339	N339	54	17.408125	120	
340	N340	22	17.899444	120	
341	N341	20	17.742222	120	
342	N342	14	16.17	120	
343	N343	38	16.17	120	
344	N344	48	16.17	120	
345	N345	34	18.842778	120	
346	N346	58	16.17	120	
347	N347	24	16.17	120	
348	N348	42	16.17	120	
349	N349	18	16.17	120	
350	N350	8	16.17	120	
351	N351	34	16.17	120	
352	N352	2	16.327222	120	
353	N353	4	16.17	120	
354	N354	20	16.17	120	
355	N355	12	16.17	120	
356	N356	30	16.17	120	
357	N357	36	16.17	120	
358	N358	6	16.641667	120	
359	N359	50	16.17	120	
360	N360	60	16.17	120	
361	N361	10	16.956111	120	
362	N362	14	17.270556	120	
363	N363	4	16.484444	120	
364	N364	16	17.427778	120	
365	N365	28	18.371111	120	
366	N366	32	18.685556	120	
367	N367	42	18.469375	120	
368	N368	44	18.2925	120	

**Node Coordinates (Continued)**

	Label	X [ft]	Y [ft]	Z [ft]	Detach From Diaphragm
369	N369	46	18.115625	120	
370	N370	50	17.761875	120	
371	N371	58	17.054375	120	
372	N372	66	16.346875	120	
373	N373	40	18.64625	150	
374	N374	2	16.17	150	
375	N375	8	16.17	150	
376	N376	52	17.585	150	
377	N377	18	17.585	150	
378	N378	6	16.17	150	
379	N379	46	16.17	150	
380	N380	38	18.823125	150	
381	N381	62	16.17	150	
382	N382	22	16.17	150	
383	N383	26	16.17	150	
384	N384	64	16.52375	150	
385	N385	2	16.327222	150	
386	N386	28	18.371111	150	
387	N387	16	17.427778	150	
388	N388	14	16.17	150	
389	N389	30	16.17	150	
390	N390	54	17.408125	150	
391	N391	64	16.17	150	
392	N392	54	16.17	150	
393	N393	26	18.213889	150	
394	N394	56	17.23125	150	
395	N395	28	16.17	150	
396	N396	30	18.528333	150	
397	N397	34	16.17	150	
398	N398	66	16.17	150	
399	N399	44	18.2925	150	
400	N400	62	16.700625	150	
401	N401	12	17.113333	150	
402	N402	40	16.17	150	
403	N403	16	16.17	150	
404	N404	52	16.17	150	
405	N405	8	16.798889	150	
406	N406	42	16.17	150	
407	N407	32	16.17	150	
408	N408	48	17.93875	150	
409	N409	44	16.17	150	
410	N410	60	16.8775	150	
411	N411	24	18.056667	150	
412	N412	10	16.17	150	
413	N413	56	16.17	150	
414	N414	22	17.899444	150	
415	N415	20	17.742222	150	
416	N416	58	17.054375	150	
417	N417	38	16.17	150	
418	N418	50	16.17	150	
419	N419	48	16.17	150	
420	N420	34	18.842778	150	
421	N421	58	16.17	150	
422	N422	24	16.17	150	
423	N423	18	16.17	150	



**Node Coordinates (Continued)**

	Label	X [ft]	Y [ft]	Z [ft]	Detach From Diaphragm
424	N424	4	16.17	150	
425	N425	20	16.17	150	
426	N426	12	16.17	150	
427	N427	36	16.17	150	
428	N428	6	16.641667	150	
429	N429	60	16.17	150	
430	N430	10	16.956111	150	
431	N431	14	17.270556	150	
432	N432	4	16.484444	150	
433	N433	32	18.685556	150	
434	N434	42	18.469375	150	
435	N435	46	18.115625	150	
436	N436	50	17.761875	150	
437	N437	66	16.346875	150	
438	N438	48	17.93875	180	
439	N439	8	16.798889	180	
440	N440	46	18.115625	180	
441	N441	4	16.17	180	
442	N442	60	16.8775	180	
443	N443	66	16.346875	180	
444	N444	20	17.742222	180	
445	N445	40	16.17	180	
446	N446	62	16.700625	180	
447	N447	42	16.17	180	
448	N448	2	16.327222	180	
449	N449	58	16.17	180	
450	N450	36	16.17	180	
451	N451	48	16.17	180	
452	N452	64	16.17	180	
453	N453	54	17.408125	180	
454	N454	10	16.17	180	
455	N455	30	18.528333	180	
456	N456	52	17.585	180	
457	N457	56	17.23125	180	
458	N458	40	18.64625	180	
459	N459	12	17.113333	180	
460	N460	60	16.17	180	
461	N461	28	16.17	180	
462	N462	30	16.17	180	
463	N463	8	16.17	180	
464	N464	50	16.17	180	
465	N465	54	16.17	180	
466	N466	18	17.585	180	
467	N467	26	18.213889	180	
468	N468	24	18.056667	180	
469	N469	6	16.17	180	
470	N470	24	16.17	180	
471	N471	2	16.17	180	
472	N472	20	16.17	180	
473	N473	46	16.17	180	
474	N474	34	18.842778	180	
475	N475	38	18.823125	180	
476	N476	62	16.17	180	
477	N477	22	16.17	180	
478	N478	26	16.17	180	



**Node Coordinates (Continued)**

	Label	X [ft]	Y [ft]	Z [ft]	Detach From Diaphragm
479	N479	14	16.17	180	
480	N480	64	16.52375	180	
481	N481	28	18.371111	180	
482	N482	16	17.427778	180	
483	N483	34	16.17	180	
484	N484	66	16.17	180	
485	N485	44	18.2925	180	
486	N486	16	16.17	180	
487	N487	52	16.17	180	
488	N488	32	16.17	180	
489	N489	44	16.17	180	
490	N490	56	16.17	180	
491	N491	22	17.899444	180	
492	N492	58	17.054375	180	
493	N493	38	16.17	180	
494	N494	18	16.17	180	
495	N495	12	16.17	180	
496	N496	6	16.641667	180	
497	N497	10	16.956111	180	
498	N498	14	17.270556	180	
499	N499	4	16.484444	180	
500	N500	32	18.685556	180	
501	N501	42	18.469375	180	
502	N502	50	17.761875	180	
503	N503	10	16.956111	210	
504	N504	58	16.17	210	
505	N505	4	16.17	210	
506	N506	10	16.17	210	
507	N507	18	16.17	210	
508	N508	66	16.17	210	
509	N509	48	17.93875	210	
510	N510	42	18.469375	210	
511	N511	34	18.842778	210	
512	N512	44	16.17	210	
513	N513	62	16.700625	210	
514	N514	36	16.17	210	
515	N515	14	16.17	210	
516	N516	52	16.17	210	
517	N517	50	16.17	210	
518	N518	64	16.52375	210	
519	N519	54	16.17	210	
520	N520	26	18.213889	210	
521	N521	12	17.113333	210	
522	N522	60	16.8775	210	
523	N523	16	16.17	210	
524	N524	16	17.427778	210	
525	N525	56	16.17	210	
526	N526	2	16.17	210	
527	N527	58	17.054375	210	
528	N528	6	16.17	210	
529	N529	56	17.23125	210	
530	N530	38	16.17	210	
531	N531	12	16.17	210	
532	N532	44	18.2925	210	
533	N533	64	16.17	210	

**Node Coordinates (Continued)**

	Label	X [ft]	Y [ft]	Z [ft]	Detach From Diaphragm
534	N534	18	17.585	210	
535	N535	48	16.17	210	
536	N536	14	17.270556	210	
537	N537	40	16.17	210	
538	N538	54	17.408125	210	
539	N539	6	16.641667	210	
540	N540	20	17.742222	210	
541	N541	34	16.17	210	
542	N542	28	16.17	210	
543	N543	8	16.798889	210	
544	N544	46	18.115625	210	
545	N545	66	16.346875	210	
546	N546	42	16.17	210	
547	N547	2	16.327222	210	
548	N548	30	18.528333	210	
549	N549	52	17.585	210	
550	N550	40	18.64625	210	
551	N551	60	16.17	210	
552	N552	30	16.17	210	
553	N553	8	16.17	210	
554	N554	24	18.056667	210	
555	N555	24	16.17	210	
556	N556	46	16.17	210	
557	N557	62	16.17	210	
558	N558	38	18.823125	210	
559	N559	22	16.17	210	
560	N560	26	16.17	210	
561	N561	28	18.371111	210	
562	N562	32	16.17	210	
563	N563	22	17.899444	210	
564	N564	4	16.484444	210	
565	N565	32	18.685556	210	
566	N566	50	17.761875	210	
567	N567	66	16.17	240	
568	N568	38	18.823125	240	
569	N569	60	16.8775	240	
570	N570	36	16.17	240	
571	N571	42	16.17	240	
572	N572	42	18.469375	240	
573	N573	64	16.17	240	
574	N574	46	18.115625	240	
575	N575	66	16.346875	240	
576	N576	52	17.585	240	
577	N577	62	16.17	240	
578	N578	50	16.17	240	
579	N579	58	16.17	240	
580	N580	48	17.93875	240	
581	N581	44	16.17	240	
582	N582	56	17.23125	240	
583	N583	62	16.700625	240	
584	N584	52	16.17	240	
585	N585	64	16.52375	240	
586	N586	54	16.17	240	
587	N587	56	16.17	240	
588	N588	58	17.054375	240	

**Node Coordinates (Continued)**

	Label	X [ft]	Y [ft]	Z [ft]	Detach From Diaphragm
589	N589	38	16.17	240	
590	N590	44	18.2925	240	
591	N591	48	16.17	240	
592	N592	40	16.17	240	
593	N593	54	17.408125	240	
594	N594	40	18.64625	240	
595	N595	60	16.17	240	
596	N596	46	16.17	240	
597	N597	50	17.761875	240	
598	N598	20	17.742222	240	
599	N599	22	16.17	240	
600	N600	24	16.17	240	
601	N601	26	16.17	240	
602	N602	28	16.17	240	
603	N603	30	16.17	240	
604	N604	32	16.17	240	
605	N605	34	16.17	240	
606	N606	22	17.899444	240	
607	N607	26	18.213889	240	
608	N608	30	18.528333	240	
609	N609	34	18.842778	240	
610	N610	24	18.056667	240	
611	N611	28	18.371111	240	
612	N612	32	18.685556	240	
613	N613	12	17.113333	21.127128	
614	N614	12	17.113333	17.026677	
615	N615	16	17.427778	16.922146	
616	N616	16	17.427778	20.766438	
617	N617	8	16.798889	8.639093	
618	N618	12	17.113333	8.871821	
619	N619	12	17.113333	12.974806	
620	N620	8	16.798889	12.934651	
621	N621	4	16.484444	21.126131	
622	N622	4	16.484444	26.242516	
623	N623	0	16.17	24.596353	
624	N624	0	16.17	20.766438	
625	N625	4	16.484444	12.972451	
626	N626	4	16.484444	17.023671	
627	N627	0	16.17	16.922146	
628	N628	0	16.17	13.077854	
629	N629	8	16.798889	17.064146	
630	N630	8	16.798889	21.362767	
631	N631	9.666667	16.929907	28.213939	
632	N632	12	17.113333	26.244455	
633	N633	1.666667	16.301019	28.092717	
634	N634	6.333333	16.66787	28.214754	
635	N635	8	16.798889	25.065433	
636	N636	8	16.798889	27.997637	
637	N637	14.333333	17.296759	28.093545	
638	N638	16	17.427778	24.596353	
639	N639	16	17.427778	27.727288	
640	N640	6.333333	16.66787	1.78631	
641	N641	4	16.484444	3.755828	
642	N642	14.333333	17.296759	1.906847	
643	N643	12	17.113333	3.756353	

**Node Coordinates (Continued)**

	Label	X [ft]	Y [ft]	Z [ft]	Detach From Diaphragm
644	N644	16	17.427778	9.233562	
645	N645	16	17.427778	5.403647	
646	N646	9.666667	16.929907	1.785132	
647	N647	8	16.798889	4.934536	
648	N648	8	16.798889	2.00227	
649	N649	0	16.17	9.233562	
650	N650	4	16.484444	8.868953	
651	N651	1.666667	16.301019	1.90663	
652	N652	0	16.17	5.403647	
653	N653	0	16.17	2.272712	
654	N654	16	17.427778	13.077854	
655	N655	0	16.17	27.727288	
656	N656	16	17.427778	2.272712	
657	N657	29.431398	18.483635	9.493342	
658	N658	29.355161	18.477642	13.131081	
659	N659	25.997101	18.213661	13.086311	
660	N660	26.048049	18.217666	9.195714	
661	N661	26.04807	18.217668	20.81604	
662	N662	22.601551	17.946733	20.958286	
663	N663	22.630805	17.949033	16.976976	
664	N664	26.005098	18.21429	16.925688	
665	N665	18.817865	17.649293	5.403293	
666	N666	19.21612	17.680601	9.020168	
667	N667	29.584476	18.495668	6.163369	
668	N668	26.434784	18.248068	5.715942	
669	N669	36	19	13.077854	
670	N670	32.691674	18.739929	13.134764	
671	N671	32.726874	18.742696	9.468421	
672	N672	36	19	9.233562	
673	N673	29.368156	18.478663	16.878523	
674	N674	32.697244	18.740367	16.871179	
675	N675	32.2722	18.706954	1.488834	
676	N676	30.00649	18.528844	1.508151	
677	N677	32.766101	18.74578	6.122513	
678	N678	36	19	5.403647	
679	N679	29.873234	18.518368	3.509929	
680	N680	26.939705	18.28776	2.405981	
681	N681	33.800061	18.82706	1.201807	
682	N682	36	19	2.272712	
683	N683	32.53782	18.727834	3.45887	
684	N684	28.469905	18.408051	1.237344	
685	N685	19.293993	17.686722	13.035348	
686	N686	24.63074	18.10625	2.007831	
687	N687	22.417564	17.93227	3.92657	
688	N688	22.60592	17.947077	9.051968	
689	N689	19.938387	17.737379	1.949932	
690	N690	18.396727	17.616187	2.369519	
691	N691	22.635951	17.949437	13.032776	
692	N692	19.297207	17.686975	16.969308	
693	N693	29.589488	18.496063	23.843763	
694	N694	29.871938	18.518266	26.499219	
695	N695	26.939543	18.287747	27.599871	
696	N696	26.44103	18.248559	24.289479	
697	N697	19.937689	17.737324	28.052198	
698	N698	22.418764	17.932364	26.077631	



**Node Coordinates (Continued)**

	Label	X [ft]	Y [ft]	Z [ft]	Detach From Diaphragm
699	N699	19.220818	17.68097	20.983412	
700	N700	18.821819	17.649604	24.599207	
701	N701	24.633223	18.106445	27.994497	
702	N702	18.397284	17.616231	27.631585	
703	N703	29.454694	18.485466	20.50654	
704	N704	32.275617	18.707222	28.510632	
705	N705	30.010245	18.529139	28.492203	
706	N706	32.538773	18.727909	26.544733	
707	N707	32.772546	18.746286	23.878016	
708	N708	36	19	24.596353	
709	N709	36	19	27.727288	
710	N710	33.802398	18.827244	28.797109	
711	N711	28.470288	18.408081	28.765216	
712	N712	36	19	20.766438	
713	N713	32.735266	18.743356	20.53287	
714	N714	36	19	16.922146	
715	N715	43.992893	18.293129	12.944393	
716	N716	39.995448	18.646653	12.980176	
717	N717	39.996503	18.646559	8.877463	
718	N718	43.995221	18.292923	8.644181	
719	N719	39.998084	18.646419	26.241137	
720	N720	39.996476	18.646562	21.128511	
721	N721	43.995554	18.292893	21.36466	
722	N722	43.997381	18.292732	25.063355	
723	N723	47.996735	17.939039	8.875691	
724	N724	47.998523	17.938881	3.758175	
725	N725	52	17.585	5.40599	
726	N726	52	17.585	9.235187	
727	N727	47.996316	17.939076	12.975164	
728	N728	47.993851	17.939294	17.02977	
729	N729	43.99183	18.293223	17.072091	
730	N730	39.994487	18.646738	17.032573	
731	N731	52	17.585	13.078396	
732	N732	42.331786	18.440033	1.787517	
733	N733	39.998595	18.646374	3.757143	
734	N734	50.332858	17.732438	1.907831	
735	N735	45.665323	18.145223	1.786307	
736	N736	43.997589	18.292713	4.937017	
737	N737	43.998977	18.29259	2.00327	
738	N738	37.666217	18.852644	1.906966	
739	N739	45.665604	18.145198	28.215555	
740	N740	47.99885	17.938852	26.245011	
741	N741	37.666347	18.852632	28.09413	
742	N742	42.332292	18.439988	28.215925	
743	N743	43.999026	18.292586	27.997623	
744	N744	52	17.585	20.764813	
745	N745	47.997183	17.938999	21.131914	
746	N746	52	17.585	16.921604	
747	N747	50.332993	17.732426	28.093185	
748	N748	52	17.585	24.59401	
749	N749	52	17.585	27.726184	
750	N750	52	17.585	2.273816	
751	N751	64	16.52375	21.126246	
752	N752	64	16.52375	17.026333	
753	N753	68	16.17	16.921604	

**Node Coordinates (Continued)**

	Label	X [ft]	Y [ft]	Z [ft]	Detach From Diaphragm
754	N754	68	16.17	20.764813	
755	N755	60	16.8775	8.639699	
756	N756	64	16.52375	8.872707	
757	N757	64	16.52375	12.975162	
758	N758	60	16.8775	12.934929	
759	N759	56	17.23125	21.125247	
760	N760	56	17.23125	26.241808	
761	N761	56	17.23125	12.972804	
762	N762	56	17.23125	17.02332	
763	N763	60	16.8775	17.06388	
764	N764	60	16.8775	21.362172	
765	N765	61.666667	16.730104	28.213664	
766	N766	64	16.52375	26.243751	
767	N767	53.666667	17.437604	28.092021	
768	N768	58.333333	17.024896	28.21448	
769	N769	60	16.8775	25.064851	
770	N770	60	16.8775	27.99732	
771	N771	66.333333	16.317396	28.092851	
772	N772	68	16.17	24.59401	
773	N773	68	16.17	27.726184	
774	N774	58.333333	17.024896	1.786588	
775	N775	56	17.23125	3.756535	
776	N776	66.333333	16.317396	1.907542	
777	N777	64	16.52375	3.757061	
778	N778	68	16.17	9.235187	
779	N779	68	16.17	5.40599	
780	N780	61.666667	16.730104	1.785408	
781	N781	60	16.8775	4.935121	
782	N782	60	16.8775	2.002589	
783	N783	56	17.23125	8.869833	
784	N784	53.666667	17.437604	1.907325	
785	N785	68	16.17	13.078396	
786	N786	68	16.17	2.273816	
787	N787	12	17.113333	51.127128	
788	N788	12	17.113333	47.026677	
789	N789	16	17.427778	46.922146	
790	N790	16	17.427778	50.766438	
791	N791	8	16.798889	38.639093	
792	N792	12	17.113333	38.871821	
793	N793	12	17.113333	42.974806	
794	N794	8	16.798889	42.934651	
795	N795	4	16.484444	51.126131	
796	N796	4	16.484444	56.242516	
797	N797	0	16.17	54.596353	
798	N798	0	16.17	50.766438	
799	N799	4	16.484444	42.972451	
800	N800	4	16.484444	47.023671	
801	N801	0	16.17	46.922146	
802	N802	0	16.17	43.077854	
803	N803	8	16.798889	47.064146	
804	N804	8	16.798889	51.362767	
805	N805	9.666667	16.929907	58.213939	
806	N806	12	17.113333	56.244455	
807	N807	1.666667	16.301019	58.092717	
808	N808	6.333333	16.66787	58.214754	

**Node Coordinates (Continued)**

	Label	X [ft]	Y [ft]	Z [ft]	Detach From Diaphragm
809	N809	8	16.798889	55.065433	
810	N810	8	16.798889	57.997637	
811	N811	14.333333	17.296759	58.093545	
812	N812	16	17.427778	54.596353	
813	N813	16	17.427778	57.727288	
814	N814	6.333333	16.66787	31.78631	
815	N815	4	16.484444	33.755828	
816	N816	14.333333	17.296759	31.906847	
817	N817	12	17.113333	33.756353	
818	N818	16	17.427778	39.233562	
819	N819	16	17.427778	35.403647	
820	N820	9.666667	16.929907	31.785132	
821	N821	8	16.798889	34.934536	
822	N822	8	16.798889	32.00227	
823	N823	0	16.17	39.233562	
824	N824	4	16.484444	38.868953	
825	N825	1.666667	16.301019	31.90663	
826	N826	0	16.17	35.403647	
827	N827	0	16.17	32.272712	
828	N828	16	17.427778	43.077854	
829	N829	0	16.17	57.727288	
830	N830	16	17.427778	32.272712	
831	N831	29.431451	18.483639	39.468396	
832	N832	29.348404	18.477111	43.052387	
833	N833	25.996447	18.21361	42.968871	
834	N834	26.048373	18.217692	39.150392	
835	N835	19.31687	17.688521	46.764445	
836	N836	19.324523	17.689122	50.424255	
837	N837	18.818553	17.649347	35.397124	
838	N838	19.218122	17.680758	38.996471	
839	N839	29.584649	18.495682	36.151261	
840	N840	26.435347	18.248112	35.700605	
841	N841	36	19	43.077854	
842	N842	32.684409	18.739358	43.095684	
843	N843	32.725172	18.742562	39.448637	
844	N844	36	19	39.233562	
845	N845	29.330252	18.475684	46.688739	
846	N846	32.668512	18.738108	46.787113	
847	N847	32.272252	18.706958	31.488353	
848	N848	30.006575	18.52885	31.507349	
849	N849	32.76596	18.745769	36.114961	
850	N850	36	19	35.403647	
851	N851	29.873376	18.518379	33.504921	
852	N852	26.939892	18.287775	32.401889	
853	N853	33.80009	18.827063	31.201489	
854	N854	36	19	32.272712	
855	N855	32.537863	18.727838	33.455587	
856	N856	28.469974	18.408056	31.235693	
857	N857	19.299832	17.687181	42.957179	
858	N858	24.630968	18.106268	32.003712	
859	N859	22.41815	17.932316	33.915685	
860	N860	22.60776	17.947221	39.003068	
861	N861	19.938625	17.737398	31.946906	
862	N862	18.396916	17.616202	32.367009	
863	N863	22.638719	17.949655	42.900773	



**Node Coordinates (Continued)**

	Label	X [ft]	Y [ft]	Z [ft]	Detach From Diaphragm
864	N864	22.649036	17.950466	46.64338	
865	N865	29.326917	18.475421	53.5604	
866	N866	29.577937	18.495154	56.297908	
867	N867	25.997192	18.213668	57.295336	
868	N868	25.991772	18.213242	53.468874	
869	N869	19.32869	17.68945	53.767894	
870	N870	19.579082	17.709133	56.458913	
871	N871	25.989007	18.213025	50.136694	
872	N872	22.655001	17.950935	50.179708	
873	N873	25.991253	18.213201	46.602638	
874	N874	22.660093	17.951335	53.504646	
875	N875	22.195378	17.914803	58.403032	
876	N876	19.802552	17.726701	58.460017	
877	N877	22.415373	17.932097	56.255119	
878	N878	23.767991	18.038428	58.658915	
879	N879	18.230272	17.603102	58.77437	
880	N880	29.327812	18.475492	50.185164	
881	N881	32.195788	18.700947	58.46765	
882	N882	29.802203	18.512784	58.40583	
883	N883	32.416825	18.718323	56.454329	
884	N884	32.66392	18.737747	53.753872	
885	N885	36	19	54.596353	
886	N886	36	19	57.727288	
887	N887	33.768769	18.8246	58.774878	
888	N888	28.229555	18.389157	58.666512	
889	N889	36	19	50.766438	
890	N890	32.664677	18.737807	50.407528	
891	N891	36	19	46.922146	
892	N892	43.992893	18.293129	42.944393	
893	N893	39.995448	18.646653	42.980176	
894	N894	39.996503	18.646559	38.877463	
895	N895	43.995221	18.292923	38.644181	
896	N896	39.998084	18.646419	56.241137	
897	N897	39.996476	18.646562	51.128511	
898	N898	43.995554	18.292893	51.36466	
899	N899	43.997381	18.292732	55.063355	
900	N900	47.996735	17.939039	38.875691	
901	N901	47.998523	17.938881	33.758175	
902	N902	52	17.585	35.40599	
903	N903	52	17.585	39.235187	
904	N904	47.996316	17.939076	42.975164	
905	N905	47.993851	17.939294	47.02977	
906	N906	43.99183	18.293223	47.072091	
907	N907	39.994487	18.646738	47.032573	
908	N908	52	17.585	43.078396	
909	N909	42.331786	18.440033	31.787517	
910	N910	39.998595	18.646374	33.757143	
911	N911	50.332858	17.732438	31.907831	
912	N912	45.665323	18.145223	31.786307	
913	N913	43.997589	18.292713	34.937017	
914	N914	43.998977	18.29259	32.00327	
915	N915	37.666217	18.852644	31.906966	
916	N916	45.665604	18.145198	58.215555	
917	N917	47.99885	17.938852	56.245011	
918	N918	37.666347	18.852632	58.09413	

**Node Coordinates (Continued)**

	Label	X [ft]	Y [ft]	Z [ft]	Detach From Diaphragm
919	N919	42.332292	18.439988	58.215925	
920	N920	43.999026	18.292586	57.997623	
921	N921	52	17.585	50.764813	
922	N922	47.997183	17.938999	51.131914	
923	N923	52	17.585	46.921604	
924	N924	50.332993	17.732426	58.093185	
925	N925	52	17.585	54.59401	
926	N926	52	17.585	57.726184	
927	N927	52	17.585	32.273816	
928	N928	64	16.52375	51.126246	
929	N929	64	16.52375	47.026333	
930	N930	68	16.17	46.921604	
931	N931	68	16.17	50.764813	
932	N932	60	16.8775	38.639699	
933	N933	64	16.52375	38.872707	
934	N934	64	16.52375	42.975162	
935	N935	60	16.8775	42.934929	
936	N936	56	17.23125	51.125247	
937	N937	56	17.23125	56.241808	
938	N938	56	17.23125	42.972804	
939	N939	56	17.23125	47.02332	
940	N940	60	16.8775	47.06388	
941	N941	60	16.8775	51.362172	
942	N942	61.666667	16.730104	58.213664	
943	N943	64	16.52375	56.243751	
944	N944	53.666667	17.437604	58.092021	
945	N945	58.333333	17.024896	58.21448	
946	N946	60	16.8775	55.064851	
947	N947	60	16.8775	57.99732	
948	N948	66.333333	16.317396	58.092851	
949	N949	68	16.17	54.59401	
950	N950	68	16.17	57.726184	
951	N951	58.333333	17.024896	31.786588	
952	N952	56	17.23125	33.756535	
953	N953	66.333333	16.317396	31.907542	
954	N954	64	16.52375	33.757061	
955	N955	68	16.17	39.235187	
956	N956	68	16.17	35.40599	
957	N957	61.666667	16.730104	31.785408	
958	N958	60	16.8775	34.935121	
959	N959	60	16.8775	32.002589	
960	N960	56	17.23125	38.869833	
961	N961	53.666667	17.437604	31.907325	
962	N962	68	16.17	43.078396	
963	N963	68	16.17	32.273816	
964	N964	12	17.113333	81.127128	
965	N965	12	17.113333	77.026677	
966	N966	16	17.427778	76.922146	
967	N967	16	17.427778	80.766438	
968	N968	8	16.798889	68.639093	
969	N969	12	17.113333	68.871821	
970	N970	12	17.113333	72.974806	
971	N971	8	16.798889	72.934651	
972	N972	4	16.484444	81.126131	
973	N973	4	16.484444	86.242516	



**Node Coordinates (Continued)**

	Label	X [ft]	Y [ft]	Z [ft]	Detach From Diaphragm
974	N974	0	16.17	84.596353	
975	N975	0	16.17	80.766438	
976	N976	4	16.484444	72.972451	
977	N977	4	16.484444	77.023671	
978	N978	0	16.17	76.922146	
979	N979	0	16.17	73.077854	
980	N980	8	16.798889	77.064146	
981	N981	8	16.798889	81.362767	
982	N982	9.666667	16.929907	88.213939	
983	N983	12	17.113333	86.244455	
984	N984	1.666667	16.301019	88.092717	
985	N985	6.333333	16.66787	88.214754	
986	N986	8	16.798889	85.065433	
987	N987	8	16.798889	87.997637	
988	N988	14.333333	17.296759	88.093545	
989	N989	16	17.427778	84.596353	
990	N990	16	17.427778	87.727288	
991	N991	6.333333	16.66787	61.78631	
992	N992	4	16.484444	63.755828	
993	N993	14.333333	17.296759	61.906847	
994	N994	12	17.113333	63.756353	
995	N995	16	17.427778	69.233562	
996	N996	16	17.427778	65.403647	
997	N997	9.666667	16.929907	61.785132	
998	N998	8	16.798889	64.934536	
999	N999	8	16.798889	62.00227	
1000	N1000	0	16.17	69.233562	
1001	N1001	4	16.484444	68.868953	
1002	N1002	1.666667	16.301019	61.90663	
1003	N1003	0	16.17	65.403647	
1004	N1004	0	16.17	62.272712	
1005	N1005	16	17.427778	73.077854	
1006	N1006	0	16.17	87.727288	
1007	N1007	16	17.427778	62.272712	
1008	N1008	29.319435	18.474833	69.737265	
1009	N1009	29.325463	18.475307	73.290214	
1010	N1010	25.984691	18.212685	73.356612	
1011	N1011	25.986002	18.212788	69.82923	
1012	N1012	26.050223	18.217837	80.853554	
1013	N1013	22.605458	17.94704	80.999496	
1014	N1014	22.638131	17.949609	77.103152	
1015	N1015	26.003677	18.214178	77.052488	
1016	N1016	19.327105	17.689325	66.225459	
1017	N1017	19.323806	17.689066	69.579569	
1018	N1018	29.324982	18.475269	66.440503	
1019	N1019	25.990063	18.213108	66.521107	
1020	N1020	36	19	73.077854	
1021	N1021	32.666037	18.737913	73.204714	
1022	N1022	32.662098	18.737604	69.570958	
1023	N1023	36	19	69.233562	
1024	N1024	29.359021	18.477945	76.970247	
1025	N1025	32.689047	18.739722	76.916539	
1026	N1026	32.195291	18.700908	61.523515	
1027	N1027	29.801481	18.512728	61.582594	
1028	N1028	32.662311	18.737621	66.228692	

**Node Coordinates (Continued)**

	Label	X [ft]	Y [ft]	Z [ft]	Detach From Diaphragm
1029	N1029	36	19	65.403647	
1030	N1030	29.576804	18.495065	63.721901	
1031	N1031	25.996112	18.213583	62.711179	
1032	N1032	33.768503	18.82458	61.218112	
1033	N1033	36	19	62.272712	
1034	N1034	32.416171	18.718271	63.54896	
1035	N1035	28.229066	18.389118	61.336047	
1036	N1036	19.319149	17.6887	73.253214	
1037	N1037	22.194507	17.914735	61.59215	
1038	N1038	19.801914	17.72665	61.536541	
1039	N1039	22.653793	17.95084	69.813125	
1040	N1040	22.658471	17.951208	66.486368	
1041	N1041	19.578146	17.70906	63.553434	
1042	N1042	23.767311	18.038375	61.332955	
1043	N1043	22.414204	17.932005	63.744975	
1044	N1044	18.23001	17.603081	61.227115	
1045	N1045	22.65103	17.950623	73.379012	
1046	N1046	19.304035	17.687512	77.063743	
1047	N1047	29.589879	18.496093	83.855601	
1048	N1048	29.872246	18.51829	86.502561	
1049	N1049	26.93992	18.287777	87.60294	
1050	N1050	26.442113	18.248644	84.305865	
1051	N1051	19.938123	17.737358	88.05444	
1052	N1052	22.419851	17.932449	86.088862	
1053	N1053	19.223356	17.681169	81.018362	
1054	N1054	18.822855	17.649686	84.610608	
1055	N1055	24.633647	18.106478	87.999611	
1056	N1056	18.397604	17.616256	87.634694	
1057	N1057	29.452688	18.485309	80.550309	
1058	N1058	32.275689	18.707228	88.511229	
1059	N1059	30.01037	18.529149	88.493245	
1060	N1060	32.538905	18.727919	86.547482	
1061	N1061	32.772268	18.746264	83.887671	
1062	N1062	36	19	84.596353	
1063	N1063	36	19	87.727288	
1064	N1064	33.802432	18.827247	88.797667	
1065	N1065	28.470423	18.408092	88.766458	
1066	N1066	36	19	80.766438	
1067	N1067	32.732863	18.743167	80.558163	
1068	N1068	36	19	76.922146	
1069	N1069	47.999802	17.938767	68.844462	
1070	N1070	47.9999	17.938759	63.743825	
1071	N1071	52	17.585	65.40599	
1072	N1072	52	17.585	69.235187	
1073	N1073	43.999926	18.292507	81.303584	
1074	N1074	39.999948	18.646255	81.034051	
1075	N1075	39.999876	18.646261	76.899429	
1076	N1076	43.999823	18.292516	76.994171	
1077	N1077	39.999819	18.646266	68.763422	
1078	N1078	39.999784	18.646269	72.831111	
1079	N1079	36	19	72.849332	
1080	N1080	36	19	68.960311	
1081	N1081	42.333224	18.439906	61.769861	
1082	N1082	39.99991	18.646258	63.712356	
1083	N1083	50.333297	17.732399	61.905215	



**Node Coordinates (Continued)**

	Label	X [ft]	Y [ft]	Z [ft]	Detach From Diaphragm
1084	N1084	45.666573	18.145112	61.773984	
1085	N1085	43.999848	18.292513	64.897427	
1086	N1086	43.999932	18.292506	61.987182	
1087	N1087	43.999788	18.292519	68.573834	
1088	N1088	37.666634	18.852607	61.899241	
1089	N1089	47.999867	17.938762	76.994795	
1090	N1090	47.999674	17.938779	72.940755	
1091	N1091	52	17.585	73.078396	
1092	N1092	52	17.585	76.921604	
1093	N1093	43.999568	18.292538	72.857314	
1094	N1094	45.666665	18.145104	88.203111	
1095	N1095	47.999989	17.938751	86.231286	
1096	N1096	37.666667	18.852604	88.065578	
1097	N1097	39.99999	18.646251	86.201422	
1098	N1098	36	19	80.627375	
1099	N1099	36	19	84.506408	
1100	N1100	42.33333	18.439896	88.199476	
1101	N1101	43.999975	18.292502	85.030962	
1102	N1102	43.999994	18.292501	87.983282	
1103	N1103	52	17.585	80.764813	
1104	N1104	47.999947	17.938755	81.104403	
1105	N1105	50.333333	17.732396	88.090571	
1106	N1106	52	17.585	84.59401	
1107	N1107	52	17.585	87.726184	
1108	N1108	52	17.585	62.273816	
1109	N1109	36	19	76.738354	
1110	N1110	36	19	87.694446	
1111	N1111	64	16.52375	81.126246	
1112	N1112	64	16.52375	77.026333	
1113	N1113	68	16.17	76.921604	
1114	N1114	68	16.17	80.764813	
1115	N1115	60	16.8775	68.639699	
1116	N1116	64	16.52375	68.872707	
1117	N1117	64	16.52375	72.975162	
1118	N1118	60	16.8775	72.934929	
1119	N1119	56	17.23125	81.125247	
1120	N1120	56	17.23125	86.241808	
1121	N1121	56	17.23125	72.972804	
1122	N1122	56	17.23125	77.02332	
1123	N1123	60	16.8775	77.06388	
1124	N1124	60	16.8775	81.362172	
1125	N1125	61.666667	16.730104	88.213664	
1126	N1126	64	16.52375	86.243751	
1127	N1127	53.666667	17.437604	88.092021	
1128	N1128	58.333333	17.024896	88.21448	
1129	N1129	60	16.8775	85.064851	
1130	N1130	60	16.8775	87.99732	
1131	N1131	66.333333	16.317396	88.092851	
1132	N1132	68	16.17	84.59401	
1133	N1133	68	16.17	87.726184	
1134	N1134	58.333333	17.024896	61.786588	
1135	N1135	56	17.23125	63.756535	
1136	N1136	66.333333	16.317396	61.907542	
1137	N1137	64	16.52375	63.757061	
1138	N1138	68	16.17	69.235187	



**Node Coordinates (Continued)**

	Label	X [ft]	Y [ft]	Z [ft]	Detach From Diaphragm
1139	N1139	68	16.17	65.40599	
1140	N1140	61.666667	16.730104	61.785408	
1141	N1141	60	16.8775	64.935121	
1142	N1142	60	16.8775	62.002589	
1143	N1143	56	17.23125	68.869833	
1144	N1144	53.666667	17.437604	61.907325	
1145	N1145	68	16.17	73.078396	
1146	N1146	68	16.17	62.273816	
1147	N1147	12	17.113333	111.127128	
1148	N1148	12	17.113333	107.026677	
1149	N1149	16	17.427778	106.922146	
1150	N1150	16	17.427778	110.766438	
1151	N1151	8	16.798889	98.639093	
1152	N1152	12	17.113333	98.871821	
1153	N1153	12	17.113333	102.974806	
1154	N1154	8	16.798889	102.934651	
1155	N1155	4	16.484444	111.126131	
1156	N1156	4	16.484444	116.242516	
1157	N1157	0	16.17	114.596353	
1158	N1158	0	16.17	110.766438	
1159	N1159	4	16.484444	102.972451	
1160	N1160	4	16.484444	107.023671	
1161	N1161	0	16.17	106.922146	
1162	N1162	0	16.17	103.077854	
1163	N1163	8	16.798889	107.064146	
1164	N1164	8	16.798889	111.362767	
1165	N1165	9.666667	16.929907	118.213939	
1166	N1166	12	17.113333	116.244455	
1167	N1167	1.666667	16.301019	118.092717	
1168	N1168	6.333333	16.66787	118.214754	
1169	N1169	8	16.798889	115.065433	
1170	N1170	8	16.798889	117.997637	
1171	N1171	14.333333	17.296759	118.093545	
1172	N1172	16	17.427778	114.596353	
1173	N1173	16	17.427778	117.727288	
1174	N1174	6.333333	16.66787	91.78631	
1175	N1175	4	16.484444	93.755828	
1176	N1176	14.333333	17.296759	91.906847	
1177	N1177	12	17.113333	93.756353	
1178	N1178	16	17.427778	99.233562	
1179	N1179	16	17.427778	95.403647	
1180	N1180	9.666667	16.929907	91.785132	
1181	N1181	8	16.798889	94.934536	
1182	N1182	8	16.798889	92.00227	
1183	N1183	0	16.17	99.233562	
1184	N1184	4	16.484444	98.868953	
1185	N1185	1.666667	16.301019	91.90663	
1186	N1186	0	16.17	95.403647	
1187	N1187	0	16.17	92.272712	
1188	N1188	16	17.427778	103.077854	
1189	N1189	0	16.17	117.727288	
1190	N1190	16	17.427778	92.272712	
1191	N1191	29.431451	18.483639	99.468396	
1192	N1192	29.348404	18.477111	103.052387	
1193	N1193	25.996447	18.21361	102.968871	



**Node Coordinates (Continued)**

	Label	X [ft]	Y [ft]	Z [ft]	Detach From Diaphragm
1194	N1194	26.048373	18.217692	99.150392	
1195	N1195	19.31687	17.688521	106.764445	
1196	N1196	19.324523	17.689122	110.424255	
1197	N1197	18.818553	17.649347	95.397124	
1198	N1198	19.218122	17.680758	98.996471	
1199	N1199	29.584649	18.495682	96.151261	
1200	N1200	26.435347	18.248112	95.700605	
1201	N1201	36	19	103.077854	
1202	N1202	32.684409	18.739358	103.095684	
1203	N1203	32.725172	18.742562	99.448637	
1204	N1204	36	19	99.233562	
1205	N1205	29.330252	18.475684	106.688739	
1206	N1206	32.668512	18.738108	106.787113	
1207	N1207	32.272252	18.706958	91.488353	
1208	N1208	30.006575	18.52885	91.507349	
1209	N1209	32.76596	18.745769	96.114961	
1210	N1210	36	19	95.403647	
1211	N1211	29.873376	18.518379	93.504921	
1212	N1212	26.939892	18.287775	92.401889	
1213	N1213	33.80009	18.827063	91.201489	
1214	N1214	36	19	92.272712	
1215	N1215	32.537863	18.727838	93.455587	
1216	N1216	28.469974	18.408056	91.235693	
1217	N1217	19.299832	17.687181	102.957179	
1218	N1218	24.630968	18.106268	92.003712	
1219	N1219	22.41815	17.932316	93.915685	
1220	N1220	22.60776	17.947221	99.003068	
1221	N1221	19.938625	17.737398	91.946906	
1222	N1222	18.396916	17.616202	92.367009	
1223	N1223	22.638719	17.949655	102.900773	
1224	N1224	22.649036	17.950466	106.64338	
1225	N1225	29.326917	18.475421	113.5604	
1226	N1226	29.577937	18.495154	116.297908	
1227	N1227	25.997192	18.213668	117.295336	
1228	N1228	25.991772	18.213242	113.468874	
1229	N1229	19.32869	17.68945	113.767894	
1230	N1230	19.579082	17.709133	116.458913	
1231	N1231	25.989007	18.213025	110.136694	
1232	N1232	22.655001	17.950935	110.179708	
1233	N1233	25.991253	18.213201	106.602638	
1234	N1234	22.660093	17.951335	113.504646	
1235	N1235	22.195378	17.914803	118.403032	
1236	N1236	19.802552	17.726701	118.460017	
1237	N1237	22.415373	17.932097	116.255119	
1238	N1238	23.767991	18.038428	118.658915	
1239	N1239	18.230272	17.603102	118.77437	
1240	N1240	29.327812	18.475492	110.185164	
1241	N1241	32.195788	18.700947	118.46765	
1242	N1242	29.802203	18.512784	118.40583	
1243	N1243	32.416825	18.718323	116.454329	
1244	N1244	32.66392	18.737747	113.753872	
1245	N1245	36	19	114.596353	
1246	N1246	36	19	117.727288	
1247	N1247	33.768769	18.8246	118.774878	
1248	N1248	28.229555	18.389157	118.666512	

**Node Coordinates (Continued)**

	Label	X [ft]	Y [ft]	Z [ft]	Detach From Diaphragm
1249	N1249	36	19	110.766438	
1250	N1250	32.664677	18.737807	110.407528	
1251	N1251	36	19	106.922146	
1252	N1252	43.992893	18.293129	102.944393	
1253	N1253	39.995448	18.646653	102.980176	
1254	N1254	39.996503	18.646559	98.877463	
1255	N1255	43.995221	18.292923	98.644181	
1256	N1256	39.998084	18.646419	116.241137	
1257	N1257	39.996476	18.646562	111.128511	
1258	N1258	43.995554	18.292893	111.36466	
1259	N1259	43.997381	18.292732	115.063355	
1260	N1260	47.996735	17.939039	98.875691	
1261	N1261	47.998523	17.938881	93.758175	
1262	N1262	52	17.585	95.40599	
1263	N1263	52	17.585	99.235187	
1264	N1264	47.996316	17.939076	102.975164	
1265	N1265	47.993851	17.939294	107.02977	
1266	N1266	43.99183	18.293223	107.072091	
1267	N1267	39.994487	18.646738	107.032573	
1268	N1268	52	17.585	103.078396	
1269	N1269	42.331786	18.440033	91.787517	
1270	N1270	39.998595	18.646374	93.757143	
1271	N1271	50.332858	17.732438	91.907831	
1272	N1272	45.665323	18.145223	91.786307	
1273	N1273	43.997589	18.292713	94.937017	
1274	N1274	43.998977	18.29259	92.00327	
1275	N1275	37.666217	18.852644	91.906966	
1276	N1276	45.665604	18.145198	118.215555	
1277	N1277	47.99885	17.938852	116.245011	
1278	N1278	37.666347	18.852632	118.09413	
1279	N1279	42.332292	18.439988	118.215925	
1280	N1280	43.999026	18.292586	117.997623	
1281	N1281	52	17.585	110.764813	
1282	N1282	47.997183	17.938999	111.131914	
1283	N1283	52	17.585	106.921604	
1284	N1284	50.332993	17.732426	118.093185	
1285	N1285	52	17.585	114.59401	
1286	N1286	52	17.585	117.726184	
1287	N1287	52	17.585	92.273816	
1288	N1288	64	16.52375	111.126246	
1289	N1289	64	16.52375	107.026333	
1290	N1290	68	16.17	106.921604	
1291	N1291	68	16.17	110.764813	
1292	N1292	60	16.8775	98.639699	
1293	N1293	64	16.52375	98.872707	
1294	N1294	64	16.52375	102.975162	
1295	N1295	60	16.8775	102.934929	
1296	N1296	56	17.23125	111.125247	
1297	N1297	56	17.23125	116.241808	
1298	N1298	56	17.23125	102.972804	
1299	N1299	56	17.23125	107.02332	
1300	N1300	60	16.8775	107.06388	
1301	N1301	60	16.8775	111.362172	
1302	N1302	61.666667	16.730104	118.213664	
1303	N1303	64	16.52375	116.243751	



**Node Coordinates (Continued)**

	Label	X [ft]	Y [ft]	Z [ft]	Detach From Diaphragm
1304	N1304	53.666667	17.437604	118.092021	
1305	N1305	58.333333	17.024896	118.21448	
1306	N1306	60	16.8775	115.064851	
1307	N1307	60	16.8775	117.99732	
1308	N1308	66.333333	16.317396	118.092851	
1309	N1309	68	16.17	114.59401	
1310	N1310	68	16.17	117.726184	
1311	N1311	58.333333	17.024896	91.786588	
1312	N1312	56	17.23125	93.756535	
1313	N1313	66.333333	16.317396	91.907542	
1314	N1314	64	16.52375	93.757061	
1315	N1315	68	16.17	99.235187	
1316	N1316	68	16.17	95.40599	
1317	N1317	61.666667	16.730104	91.785408	
1318	N1318	60	16.8775	94.935121	
1319	N1319	60	16.8775	92.002589	
1320	N1320	56	17.23125	98.869833	
1321	N1321	53.666667	17.437604	91.907325	
1322	N1322	68	16.17	103.078396	
1323	N1323	68	16.17	92.273816	
1324	N1324	12	17.113333	141.127128	
1325	N1325	12	17.113333	137.026677	
1326	N1326	16	17.427778	136.922146	
1327	N1327	16	17.427778	140.766438	
1328	N1328	8	16.798889	128.639093	
1329	N1329	12	17.113333	128.871821	
1330	N1330	12	17.113333	132.974806	
1331	N1331	8	16.798889	132.934651	
1332	N1332	4	16.484444	141.126131	
1333	N1333	4	16.484444	146.242516	
1334	N1334	0	16.17	144.596353	
1335	N1335	0	16.17	140.766438	
1336	N1336	4	16.484444	132.972451	
1337	N1337	4	16.484444	137.023671	
1338	N1338	0	16.17	136.922146	
1339	N1339	0	16.17	133.077854	
1340	N1340	8	16.798889	137.064146	
1341	N1341	8	16.798889	141.362767	
1342	N1342	9.666667	16.929907	148.213939	
1343	N1343	12	17.113333	146.244455	
1344	N1344	1.666667	16.301019	148.092717	
1345	N1345	6.333333	16.66787	148.214754	
1346	N1346	8	16.798889	145.065433	
1347	N1347	8	16.798889	147.997637	
1348	N1348	14.333333	17.296759	148.093545	
1349	N1349	16	17.427778	144.596353	
1350	N1350	16	17.427778	147.727288	
1351	N1351	6.333333	16.66787	121.78631	
1352	N1352	4	16.484444	123.755828	
1353	N1353	14.333333	17.296759	121.906847	
1354	N1354	12	17.113333	123.756353	
1355	N1355	16	17.427778	129.233562	
1356	N1356	16	17.427778	125.403647	
1357	N1357	9.666667	16.929907	121.785132	
1358	N1358	8	16.798889	124.934536	

**Node Coordinates (Continued)**

	Label	X [ft]	Y [ft]	Z [ft]	Detach From Diaphragm
1359	N1359	8	16.798889	122.00227	
1360	N1360	0	16.17	129.233562	
1361	N1361	4	16.484444	128.868953	
1362	N1362	1.666667	16.301019	121.906663	
1363	N1363	0	16.17	125.403647	
1364	N1364	0	16.17	122.272712	
1365	N1365	16	17.427778	133.077854	
1366	N1366	0	16.17	147.727288	
1367	N1367	16	17.427778	122.272712	
1368	N1368	22.647057	17.95031	140.286139	
1369	N1369	22.645012	17.95015	136.79182	
1370	N1370	25.976734	18.21206	136.773364	
1371	N1371	25.981008	18.212396	140.232196	
1372	N1372	29.317258	18.474662	126.420024	
1373	N1373	29.313954	18.474402	129.735323	
1374	N1374	25.978116	18.212169	129.800994	
1375	N1375	25.983667	18.212605	126.514736	
1376	N1376	29.318151	18.474732	140.268793	
1377	N1377	29.322885	18.475105	143.565139	
1378	N1378	25.986968	18.212864	143.50113	
1379	N1379	22.654558	17.9509	143.557166	
1380	N1380	19.321359	17.688873	136.834219	
1381	N1381	19.323986	17.68908	140.44254	
1382	N1382	22.647228	17.950324	133.233555	
1383	N1383	19.322412	17.688956	133.169811	
1384	N1384	22.411455	17.931789	146.284031	
1385	N1385	25.994789	18.213479	147.289506	
1386	N1386	19.326544	17.689281	143.765645	
1387	N1387	22.193398	17.914648	148.4017	
1388	N1388	19.801171	17.726592	148.458418	
1389	N1389	19.577044	17.708973	146.445715	
1390	N1390	23.766607	18.038319	148.662539	
1391	N1391	18.229703	17.603057	148.771688	
1392	N1392	29.314536	18.474448	133.231723	
1393	N1393	29.316205	18.474579	136.774796	
1394	N1394	25.979721	18.212295	133.260055	
1395	N1395	29.575533	18.494966	146.279306	
1396	N1396	32.661122	18.737527	143.768313	
1397	N1397	32.659187	18.737375	140.437456	
1398	N1398	36	19	140.766438	
1399	N1399	36	19	144.596353	
1400	N1400	32.194997	18.700884	148.461575	
1401	N1401	29.801082	18.512696	148.39902	
1402	N1402	32.4155	18.718218	146.447302	
1403	N1403	36	19	147.727288	
1404	N1404	33.768416	18.824573	148.772694	
1405	N1405	28.228567	18.389079	148.661305	
1406	N1406	36	19	136.922146	
1407	N1407	32.657775	18.737264	136.828791	
1408	N1408	32.657136	18.737214	133.165806	
1409	N1409	36	19	133.077854	
1410	N1410	19.574199	17.70875	123.535701	
1411	N1411	19.324341	17.689108	126.227573	
1412	N1412	32.193434	18.700762	121.523648	
1413	N1413	29.798875	18.512523	121.583171	



**Node Coordinates (Continued)**

	Label	X [ft]	Y [ft]	Z [ft]	Detach From Diaphragm
1414	N1414	36	19	129.233562	
1415	N1415	32.657454	18.737239	129.555974	
1416	N1416	32.658851	18.737349	126.223886	
1417	N1417	36	19	125.403647	
1418	N1418	29.572462	18.494724	123.718477	
1419	N1419	25.992228	18.213278	122.710457	
1420	N1420	33.767604	18.824509	121.217807	
1421	N1421	36	19	122.272712	
1422	N1422	32.413561	18.718066	123.545422	
1423	N1423	28.227261	18.388976	121.335351	
1424	N1424	19.323615	17.689051	129.563487	
1425	N1425	23.764802	18.038178	121.328026	
1426	N1426	22.409775	17.931657	123.730724	
1427	N1427	22.192537	17.91458	121.604076	
1428	N1428	22.65399	17.950855	126.477817	
1429	N1429	19.800608	17.726548	121.544848	
1430	N1430	18.229134	17.603013	121.225544	
1431	N1431	22.651636	17.95067	129.781004	
1432	N1432	43.992893	18.293129	132.944393	
1433	N1433	39.995448	18.646653	132.980176	
1434	N1434	39.996503	18.646559	128.877463	
1435	N1435	43.995221	18.292923	128.644181	
1436	N1436	39.998084	18.646419	146.241137	
1437	N1437	39.996476	18.646562	141.128511	
1438	N1438	43.995554	18.292893	141.36466	
1439	N1439	43.997381	18.292732	145.063355	
1440	N1440	47.996735	17.939039	128.875691	
1441	N1441	47.998523	17.938881	123.758175	
1442	N1442	52	17.585	125.40599	
1443	N1443	52	17.585	129.235187	
1444	N1444	47.996316	17.939076	132.975164	
1445	N1445	47.993851	17.939294	137.02977	
1446	N1446	43.99183	18.293223	137.072091	
1447	N1447	39.994487	18.646738	137.032573	
1448	N1448	52	17.585	133.078396	
1449	N1449	42.331786	18.440033	121.787517	
1450	N1450	39.998595	18.646374	123.757143	
1451	N1451	50.332858	17.732438	121.907831	
1452	N1452	45.665323	18.145223	121.786307	
1453	N1453	43.997589	18.292713	124.937017	
1454	N1454	43.998977	18.29259	122.00327	
1455	N1455	37.666217	18.852644	121.906966	
1456	N1456	45.665604	18.145198	148.215555	
1457	N1457	47.99885	17.938852	146.245011	
1458	N1458	37.666347	18.852632	148.09413	
1459	N1459	42.332292	18.439988	148.215925	
1460	N1460	43.999026	18.292586	147.997623	
1461	N1461	52	17.585	140.764813	
1462	N1462	47.997183	17.938999	141.131914	
1463	N1463	52	17.585	136.921604	
1464	N1464	50.332993	17.732426	148.093185	
1465	N1465	52	17.585	144.59401	
1466	N1466	52	17.585	147.726184	
1467	N1467	52	17.585	122.273816	
1468	N1468	64	16.52375	141.126246	



**Node Coordinates (Continued)**

	Label	X [ft]	Y [ft]	Z [ft]	Detach From Diaphragm
1469	N1469	64	16.52375	137.026333	
1470	N1470	68	16.17	136.921604	
1471	N1471	68	16.17	140.764813	
1472	N1472	60	16.8775	128.639699	
1473	N1473	64	16.52375	128.872707	
1474	N1474	64	16.52375	132.975162	
1475	N1475	60	16.8775	132.934929	
1476	N1476	56	17.23125	141.125247	
1477	N1477	56	17.23125	146.241808	
1478	N1478	56	17.23125	132.972804	
1479	N1479	56	17.23125	137.02332	
1480	N1480	60	16.8775	137.06388	
1481	N1481	60	16.8775	141.362172	
1482	N1482	61.666667	16.730104	148.213664	
1483	N1483	64	16.52375	146.243751	
1484	N1484	53.666667	17.437604	148.092021	
1485	N1485	58.333333	17.024896	148.21448	
1486	N1486	60	16.8775	145.064851	
1487	N1487	60	16.8775	147.99732	
1488	N1488	66.333333	16.317396	148.092851	
1489	N1489	68	16.17	144.59401	
1490	N1490	68	16.17	147.726184	
1491	N1491	58.333333	17.024896	121.786588	
1492	N1492	56	17.23125	123.756535	
1493	N1493	66.333333	16.317396	121.907542	
1494	N1494	64	16.52375	123.757061	
1495	N1495	68	16.17	129.235187	
1496	N1496	68	16.17	125.40599	
1497	N1497	61.666667	16.730104	121.785408	
1498	N1498	60	16.8775	124.935121	
1499	N1499	60	16.8775	122.002589	
1500	N1500	56	17.23125	128.869833	
1501	N1501	53.666667	17.437604	121.907325	
1502	N1502	68	16.17	133.078396	
1503	N1503	68	16.17	122.273816	
1504	N1504	12	17.113333	171.127128	
1505	N1505	12	17.113333	167.026677	
1506	N1506	16	17.427778	166.922146	
1507	N1507	16	17.427778	170.766438	
1508	N1508	8	16.798889	158.639093	
1509	N1509	12	17.113333	158.871821	
1510	N1510	12	17.113333	162.974806	
1511	N1511	8	16.798889	162.934651	
1512	N1512	4	16.484444	171.126131	
1513	N1513	4	16.484444	176.242516	
1514	N1514	0	16.17	174.596353	
1515	N1515	0	16.17	170.766438	
1516	N1516	4	16.484444	162.972451	
1517	N1517	4	16.484444	167.023671	
1518	N1518	0	16.17	166.922146	
1519	N1519	0	16.17	163.077854	
1520	N1520	8	16.798889	167.064146	
1521	N1521	8	16.798889	171.362767	
1522	N1522	9.666667	16.929907	178.213939	
1523	N1523	12	17.113333	176.244455	



**Node Coordinates (Continued)**

	Label	X [ft]	Y [ft]	Z [ft]	Detach From Diaphragm
1524	N1524	1.666667	16.301019	178.092717	
1525	N1525	6.333333	16.66787	178.214754	
1526	N1526	8	16.798889	175.065433	
1527	N1527	8	16.798889	177.997637	
1528	N1528	14.333333	17.296759	178.093545	
1529	N1529	16	17.427778	174.596353	
1530	N1530	16	17.427778	177.727288	
1531	N1531	6.333333	16.66787	151.78631	
1532	N1532	4	16.484444	153.755828	
1533	N1533	14.333333	17.296759	151.906847	
1534	N1534	12	17.113333	153.756353	
1535	N1535	16	17.427778	159.233562	
1536	N1536	16	17.427778	155.403647	
1537	N1537	9.666667	16.929907	151.785132	
1538	N1538	8	16.798889	154.934536	
1539	N1539	8	16.798889	152.00227	
1540	N1540	0	16.17	159.233562	
1541	N1541	4	16.484444	158.868953	
1542	N1542	1.666667	16.301019	151.90663	
1543	N1543	0	16.17	155.403647	
1544	N1544	0	16.17	152.272712	
1545	N1545	16	17.427778	163.077854	
1546	N1546	0	16.17	177.727288	
1547	N1547	16	17.427778	152.272712	
1548	N1548	23.817866	18.042349	168.381875	
1549	N1549	19.88996	17.733572	167.285216	
1550	N1550	19.987746	17.741259	163.861343	
1551	N1551	23.99211	18.056046	164.621371	
1552	N1552	28.25631	18.39126	161.635652	
1553	N1553	32.145997	18.697033	162.750068	
1554	N1554	32.012031	18.686501	166.137979	
1555	N1555	28.00713	18.371672	165.375439	
1556	N1556	31.964285	18.682748	175.402779	
1557	N1557	27.927952	18.365447	175.544376	
1558	N1558	27.619666	18.341213	172.436027	
1559	N1559	31.880826	18.676187	172.289528	
1560	N1560	19.633409	17.713404	171.035645	
1561	N1561	18.954801	17.660058	174.587365	
1562	N1562	27.566494	18.337033	168.854907	
1563	N1563	26.002086	18.214053	177.814651	
1564	N1564	23.979034	18.055019	177.948868	
1565	N1565	22.31482	17.924193	175.590567	
1566	N1566	18.018206	17.586431	177.727649	
1567	N1567	19.999992	17.742222	177.99842	
1568	N1568	23.320558	18.003255	171.959414	
1569	N1569	31.840067	18.672983	169.290625	
1570	N1570	36	19	170.766438	
1571	N1571	36	19	174.596353	
1572	N1572	34.008388	18.843437	178.357084	
1573	N1573	36	19	177.727288	
1574	N1574	29.99531	18.527965	177.960318	
1575	N1575	31.995896	18.685233	177.930225	
1576	N1576	20.049914	17.746146	154.635657	
1577	N1577	24.05341	18.060865	154.451873	
1578	N1578	24.409212	18.088835	157.634688	

**Node Coordinates (Continued)**

	Label	X [ft]	Y [ft]	Z [ft]	Detach From Diaphragm
1579	N1579	20.131142	17.752531	157.751961	
1580	N1580	32.363948	18.714166	159.001299	
1581	N1581	33.054868	18.76848	155.421939	
1582	N1582	36	19	155.403647	
1583	N1583	36	19	159.233562	
1584	N1584	24.419129	18.089615	161.166883	
1585	N1585	36	19	163.077854	
1586	N1586	25.971176	18.211623	152.176361	
1587	N1587	28.008034	18.371743	152.169291	
1588	N1588	29.680001	18.503178	154.44138	
1589	N1589	36	19	152.272712	
1590	N1590	33.960331	18.839659	152.275762	
1591	N1591	31.997032	18.685322	152.0014	
1592	N1592	28.687323	18.425142	158.038963	
1593	N1593	20.08369	17.748801	160.713269	
1594	N1594	17.991601	17.58434	151.642879	
1595	N1595	22.004552	17.899802	152.039773	
1596	N1596	20.004217	17.742554	152.067297	
1597	N1597	36	19	166.922146	
1598	N1598	43.992893	18.293129	162.944393	
1599	N1599	39.995448	18.646653	162.980176	
1600	N1600	39.996503	18.646559	158.877463	
1601	N1601	43.995221	18.292923	158.644181	
1602	N1602	39.998084	18.646419	176.241137	
1603	N1603	39.996476	18.646562	171.128511	
1604	N1604	43.995554	18.292893	171.36466	
1605	N1605	43.997381	18.292732	175.063355	
1606	N1606	47.996735	17.939039	158.875691	
1607	N1607	47.998523	17.938881	153.758175	
1608	N1608	52	17.585	155.40599	
1609	N1609	52	17.585	159.235187	
1610	N1610	47.996316	17.939076	162.975164	
1611	N1611	47.993851	17.939294	167.02977	
1612	N1612	43.99183	18.293223	167.072091	
1613	N1613	39.994487	18.646738	167.032573	
1614	N1614	52	17.585	163.078396	
1615	N1615	42.331786	18.440033	151.787517	
1616	N1616	39.998595	18.646374	153.757143	
1617	N1617	50.332858	17.732438	151.907831	
1618	N1618	45.665323	18.145223	151.786307	
1619	N1619	43.997589	18.292713	154.937017	
1620	N1620	43.998977	18.29259	152.00327	
1621	N1621	37.666217	18.852644	151.906966	
1622	N1622	45.665604	18.145198	178.215555	
1623	N1623	47.99885	17.938852	176.245011	
1624	N1624	37.666347	18.852632	178.09413	
1625	N1625	42.332292	18.439988	178.215925	
1626	N1626	43.999026	18.292586	177.997623	
1627	N1627	52	17.585	170.764813	
1628	N1628	47.997183	17.938999	171.131914	
1629	N1629	52	17.585	166.921604	
1630	N1630	50.332993	17.732426	178.093185	
1631	N1631	52	17.585	174.59401	
1632	N1632	52	17.585	177.726184	
1633	N1633	52	17.585	152.273816	

**Node Coordinates (Continued)**

	Label	X [ft]	Y [ft]	Z [ft]	Detach From Diaphragm
1634	N1634	64	16.52375	171.126246	
1635	N1635	64	16.52375	167.026333	
1636	N1636	68	16.17	166.921604	
1637	N1637	68	16.17	170.764813	
1638	N1638	60	16.8775	158.639699	
1639	N1639	64	16.52375	158.872707	
1640	N1640	64	16.52375	162.975162	
1641	N1641	60	16.8775	162.934929	
1642	N1642	56	17.23125	171.125247	
1643	N1643	56	17.23125	176.241808	
1644	N1644	56	17.23125	162.972804	
1645	N1645	56	17.23125	167.02332	
1646	N1646	60	16.8775	167.06388	
1647	N1647	60	16.8775	171.362172	
1648	N1648	61.666667	16.730104	178.213664	
1649	N1649	64	16.52375	176.243751	
1650	N1650	53.666667	17.437604	178.092021	
1651	N1651	58.333333	17.024896	178.21448	
1652	N1652	60	16.8775	175.064851	
1653	N1653	60	16.8775	177.99732	
1654	N1654	66.333333	16.317396	178.092851	
1655	N1655	68	16.17	174.59401	
1656	N1656	68	16.17	177.726184	
1657	N1657	58.333333	17.024896	151.786588	
1658	N1658	56	17.23125	153.756535	
1659	N1659	66.333333	16.317396	151.907542	
1660	N1660	64	16.52375	153.757061	
1661	N1661	68	16.17	159.235187	
1662	N1662	68	16.17	155.40599	
1663	N1663	61.666667	16.730104	151.785408	
1664	N1664	60	16.8775	154.935121	
1665	N1665	60	16.8775	152.002589	
1666	N1666	56	17.23125	158.869833	
1667	N1667	53.666667	17.437604	151.907325	
1668	N1668	68	16.17	163.078396	
1669	N1669	68	16.17	152.273816	
1670	N1670	12	17.113333	201.127128	
1671	N1671	12	17.113333	197.026677	
1672	N1672	16	17.427778	196.922146	
1673	N1673	16	17.427778	200.766438	
1674	N1674	8	16.798889	188.639093	
1675	N1675	12	17.113333	188.871821	
1676	N1676	12	17.113333	192.974806	
1677	N1677	8	16.798889	192.934651	
1678	N1678	4	16.484444	201.126131	
1679	N1679	4	16.484444	206.242516	
1680	N1680	0	16.17	204.596353	
1681	N1681	0	16.17	200.766438	
1682	N1682	4	16.484444	192.972451	
1683	N1683	4	16.484444	197.023671	
1684	N1684	0	16.17	196.922146	
1685	N1685	0	16.17	193.077854	
1686	N1686	8	16.798889	197.064146	
1687	N1687	8	16.798889	201.362767	
1688	N1688	9.666667	16.929907	208.213939	

**Node Coordinates (Continued)**

	Label	X [ft]	Y [ft]	Z [ft]	Detach From Diaphragm
1689	N1689	12	17.113333	206.244455	
1690	N1690	1.666667	16.301019	208.092717	
1691	N1691	6.333333	16.66787	208.214754	
1692	N1692	8	16.798889	205.065433	
1693	N1693	8	16.798889	207.997637	
1694	N1694	14.333333	17.296759	208.093545	
1695	N1695	16	17.427778	204.596353	
1696	N1696	16	17.427778	207.727288	
1697	N1697	6.333333	16.66787	181.78631	
1698	N1698	4	16.484444	183.755828	
1699	N1699	14.333333	17.296759	181.906847	
1700	N1700	12	17.113333	183.756353	
1701	N1701	16	17.427778	189.233562	
1702	N1702	16	17.427778	185.403647	
1703	N1703	9.666667	16.929907	181.785132	
1704	N1704	8	16.798889	184.934536	
1705	N1705	8	16.798889	182.00227	
1706	N1706	0	16.17	189.233562	
1707	N1707	4	16.484444	188.868953	
1708	N1708	1.666667	16.301019	181.90663	
1709	N1709	0	16.17	185.403647	
1710	N1710	0	16.17	182.272712	
1711	N1711	16	17.427778	193.077854	
1712	N1712	0	16.17	207.727288	
1713	N1713	16	17.427778	182.272712	
1714	N1714	36	19	207.727288	
1715	N1715	33.950831	18.838913	207.723216	
1716	N1716	33.017992	18.765581	204.587005	
1717	N1717	36	19	204.596353	
1718	N1718	18.919884	17.657313	185.411101	
1719	N1719	22.295301	17.922658	184.45505	
1720	N1720	23.167715	17.99124	188.027433	
1721	N1721	19.602291	17.710958	188.903264	
1722	N1722	20.131302	17.752544	202.301719	
1723	N1723	19.979597	17.740618	199.24677	
1724	N1724	24.348067	18.084029	198.782551	
1725	N1725	24.318543	18.081708	202.31585	
1726	N1726	32.337823	18.712112	201.001381	
1727	N1727	32.106278	18.69391	197.285125	
1728	N1728	36	19	196.922146	
1729	N1729	36	19	200.766438	
1730	N1730	29.692222	18.504139	205.570431	
1731	N1731	24.054704	18.060967	205.530944	
1732	N1732	28.613258	18.41932	201.899794	
1733	N1733	31.998677	18.685452	208.023917	
1734	N1734	28.015931	18.372363	207.839773	
1735	N1735	25.979232	18.212256	207.832672	
1736	N1736	28.146025	18.38259	198.287615	
1737	N1737	32.015266	18.686756	193.82889	
1738	N1738	28.009021	18.37182	194.563807	
1739	N1739	20.089039	17.749222	205.329454	
1740	N1740	16	17.427778	207.695842	
1741	N1741	16	17.427778	204.509548	
1742	N1742	19.983875	17.740955	196.008952	
1743	N1743	16	17.427778	200.63016	



**Node Coordinates (Continued)**

	Label	X [ft]	Y [ft]	Z [ft]	Detach From Diaphragm
1744	N1744	16	17.427778	196.740442	
1745	N1745	22.001759	17.899583	207.960852	
1746	N1746	17.999656	17.584973	208.586433	
1747	N1747	20.003587	17.742504	207.889453	
1748	N1748	31.86898	18.675256	187.744899	
1749	N1749	31.958823	18.682319	190.679943	
1750	N1750	27.619173	18.341174	191.175553	
1751	N1751	27.569117	18.337239	187.800858	
1752	N1752	23.633599	18.027863	191.683094	
1753	N1753	19.771279	17.724242	192.608715	
1754	N1754	27.930633	18.365658	184.435217	
1755	N1755	18.042309	17.588326	182.282792	
1756	N1756	19.993611	17.74172	181.987488	
1757	N1757	16	17.427778	188.961007	
1758	N1758	23.98858	18.055769	182.244083	
1759	N1759	26.007052	18.214443	182.071694	
1760	N1760	16	17.427778	192.850725	
1761	N1761	31.9031	18.677938	184.645483	
1762	N1762	36	19	182.272712	
1763	N1763	36	19	185.403647	
1764	N1764	36	19	189.233562	
1765	N1765	36	19	193.077854	
1766	N1766	29.999998	18.528333	182.008588	
1767	N1767	34.005844	18.843237	181.377325	
1768	N1768	31.987764	18.684594	182.179384	
1769	N1769	23.989323	18.055827	195.283423	
1770	N1770	48	17.93875	201.126246	
1771	N1771	48	17.93875	197.026333	
1772	N1772	52	17.585	196.921604	
1773	N1773	52	17.585	200.764813	
1774	N1774	44	18.2925	188.639699	
1775	N1775	48	17.93875	188.872707	
1776	N1776	48	17.93875	192.975162	
1777	N1777	44	18.2925	192.934929	
1778	N1778	40	18.64625	201.125247	
1779	N1779	40	18.64625	206.241808	
1780	N1780	40	18.64625	192.972804	
1781	N1781	40	18.64625	197.02332	
1782	N1782	44	18.2925	197.06388	
1783	N1783	44	18.2925	201.362172	
1784	N1784	45.666667	18.145104	208.213664	
1785	N1785	48	17.93875	206.243751	
1786	N1786	37.666667	18.852604	208.092021	
1787	N1787	42.333333	18.439896	208.21448	
1788	N1788	44	18.2925	205.064851	
1789	N1789	44	18.2925	207.99732	
1790	N1790	50.333333	17.732396	208.092851	
1791	N1791	52	17.585	204.59401	
1792	N1792	52	17.585	207.726184	
1793	N1793	42.333333	18.439896	181.786588	
1794	N1794	40	18.64625	183.756535	
1795	N1795	50.333333	17.732396	181.907542	
1796	N1796	48	17.93875	183.757061	
1797	N1797	52	17.585	189.235187	
1798	N1798	52	17.585	185.40599	

**Node Coordinates (Continued)**

	Label	X [ft]	Y [ft]	Z [ft]	Detach From Diaphragm
1799	N1799	45.666667	18.145104	181.785408	
1800	N1800	44	18.2925	184.935121	
1801	N1801	44	18.2925	182.002589	
1802	N1802	40	18.64625	188.869833	
1803	N1803	37.666667	18.852604	181.907325	
1804	N1804	52	17.585	193.078396	
1805	N1805	52	17.585	182.273816	
1806	N1806	64	16.52375	201.126246	
1807	N1807	64	16.52375	197.026333	
1808	N1808	68	16.17	196.921604	
1809	N1809	68	16.17	200.764813	
1810	N1810	60	16.8775	188.639699	
1811	N1811	64	16.52375	188.872707	
1812	N1812	64	16.52375	192.975162	
1813	N1813	60	16.8775	192.934929	
1814	N1814	56	17.23125	201.125247	
1815	N1815	56	17.23125	206.241808	
1816	N1816	56	17.23125	192.972804	
1817	N1817	56	17.23125	197.02332	
1818	N1818	60	16.8775	197.06388	
1819	N1819	60	16.8775	201.362172	
1820	N1820	61.666667	16.730104	208.213664	
1821	N1821	64	16.52375	206.243751	
1822	N1822	53.666667	17.437604	208.092021	
1823	N1823	58.333333	17.024896	208.21448	
1824	N1824	60	16.8775	205.064851	
1825	N1825	60	16.8775	207.99732	
1826	N1826	66.333333	16.317396	208.092851	
1827	N1827	68	16.17	204.59401	
1828	N1828	68	16.17	207.726184	
1829	N1829	58.333333	17.024896	181.786588	
1830	N1830	56	17.23125	183.756535	
1831	N1831	66.333333	16.317396	181.907542	
1832	N1832	64	16.52375	183.757061	
1833	N1833	68	16.17	189.235187	
1834	N1834	68	16.17	185.40599	
1835	N1835	61.666667	16.730104	181.785408	
1836	N1836	60	16.8775	184.935121	
1837	N1837	60	16.8775	182.002589	
1838	N1838	56	17.23125	188.869833	
1839	N1839	53.666667	17.437604	181.907325	
1840	N1840	68	16.17	193.078396	
1841	N1841	68	16.17	182.273816	
1842	N1842	32	18.685556	231.127128	
1843	N1843	32	18.685556	227.026677	
1844	N1844	36	19	226.922146	
1845	N1845	36	19	230.766438	
1846	N1846	28	18.371111	218.639093	
1847	N1847	32	18.685556	218.871821	
1848	N1848	32	18.685556	222.974806	
1849	N1849	28	18.371111	222.934651	
1850	N1850	24	18.056667	231.126131	
1851	N1851	24	18.056667	236.242516	
1852	N1852	20	17.742222	234.596353	
1853	N1853	20	17.742222	230.766438	

**Node Coordinates (Continued)**

	Label	X [ft]	Y [ft]	Z [ft]	Detach From Diaphragm
1854	N1854	24	18.056667	222.972451	
1855	N1855	24	18.056667	227.023671	
1856	N1856	20	17.742222	226.922146	
1857	N1857	20	17.742222	223.077854	
1858	N1858	28	18.371111	227.064146	
1859	N1859	28	18.371111	231.362767	
1860	N1860	29.666667	18.50213	238.213939	
1861	N1861	32	18.685556	236.244455	
1862	N1862	21.666667	17.873241	238.092717	
1863	N1863	26.333333	18.240093	238.214754	
1864	N1864	28	18.371111	235.065433	
1865	N1865	28	18.371111	237.997637	
1866	N1866	34.333333	18.868981	238.093545	
1867	N1867	36	19	234.596353	
1868	N1868	36	19	237.727288	
1869	N1869	26.333333	18.240093	211.78631	
1870	N1870	24	18.056667	213.755828	
1871	N1871	34.333333	18.868981	211.906847	
1872	N1872	32	18.685556	213.756353	
1873	N1873	36	19	219.233562	
1874	N1874	36	19	215.403647	
1875	N1875	29.666667	18.50213	211.785132	
1876	N1876	28	18.371111	214.934536	
1877	N1877	28	18.371111	212.00227	
1878	N1878	20	17.742222	219.233562	
1879	N1879	24	18.056667	218.868953	
1880	N1880	21.666667	17.873241	211.90663	
1881	N1881	20	17.742222	215.403647	
1882	N1882	20	17.742222	212.272712	
1883	N1883	36	19	223.077854	
1884	N1884	20	17.742222	237.727288	
1885	N1885	36	19	212.272712	
1886	N1886	43.992893	18.293129	222.944393	
1887	N1887	39.995448	18.646653	222.980176	
1888	N1888	39.996503	18.646559	218.877463	
1889	N1889	43.995221	18.292923	218.644181	
1890	N1890	39.998084	18.646419	236.241137	
1891	N1891	39.996476	18.646562	231.128511	
1892	N1892	43.995554	18.292893	231.36466	
1893	N1893	43.997381	18.292732	235.063355	
1894	N1894	47.996735	17.939039	218.875691	
1895	N1895	47.998523	17.938881	213.758175	
1896	N1896	52	17.585	215.40599	
1897	N1897	52	17.585	219.235187	
1898	N1898	47.996316	17.939076	222.975164	
1899	N1899	47.993851	17.939294	227.02977	
1900	N1900	43.99183	18.293223	227.072091	
1901	N1901	39.994487	18.646738	227.032573	
1902	N1902	52	17.585	223.078396	
1903	N1903	42.331786	18.440033	211.787517	
1904	N1904	39.998595	18.646374	213.757143	
1905	N1905	50.332858	17.732438	211.907831	
1906	N1906	45.665323	18.145223	211.786307	
1907	N1907	43.997589	18.292713	214.937017	
1908	N1908	43.998977	18.29259	212.00327	



**Node Coordinates (Continued)**

	Label	X [ft]	Y [ft]	Z [ft]	Detach From Diaphragm
1909	N1909	37.666217	18.852644	211.906966	
1910	N1910	45.665604	18.145198	238.215555	
1911	N1911	47.99885	17.938852	236.245011	
1912	N1912	37.666347	18.852632	238.09413	
1913	N1913	42.332292	18.439988	238.215925	
1914	N1914	43.999026	18.292586	237.997623	
1915	N1915	52	17.585	230.764813	
1916	N1916	47.997183	17.938999	231.131914	
1917	N1917	52	17.585	226.921604	
1918	N1918	50.332993	17.732426	238.093185	
1919	N1919	52	17.585	234.59401	
1920	N1920	52	17.585	237.726184	
1921	N1921	52	17.585	212.273816	
1922	N1922	59.992994	16.87812	222.942372	
1923	N1923	55.99532	17.231664	222.978798	
1924	N1924	55.996555	17.231555	218.877445	
1925	N1925	59.995418	16.877905	218.643548	
1926	N1926	59.995167	16.877927	231.35671	
1927	N1927	55.996699	17.231542	231.113658	
1928	N1928	55.993516	17.231823	227.027517	
1929	N1929	59.991338	16.878266	227.06818	
1930	N1930	63.996923	16.524022	218.875209	
1931	N1931	63.998571	16.523876	213.758018	
1932	N1932	68	16.17	215.40599	
1933	N1933	68	16.17	219.235187	
1934	N1934	63.996422	16.524066	222.974051	
1935	N1935	63.994699	16.524219	227.027912	
1936	N1936	68	16.17	223.078396	
1937	N1937	58.331817	17.02503	211.787472	
1938	N1938	55.998631	17.231371	213.757517	
1939	N1939	66.332869	16.317437	211.907785	
1940	N1940	61.665354	16.73022	211.786198	
1941	N1941	59.997666	16.877706	214.936869	
1942	N1942	59.999005	16.877588	212.003259	
1943	N1943	53.666224	17.437643	211.907578	
1944	N1944	61.665333	16.730222	238.211685	
1945	N1945	63.998678	16.523867	236.242195	
1946	N1946	53.666274	17.437639	238.069323	
1947	N1947	55.998646	17.23137	236.228149	
1948	N1948	52	17.585	234.503063	
1949	N1949	58.332158	17.025	238.210636	
1950	N1950	59.99768	16.877705	235.059474	
1951	N1951	59.999062	16.877583	237.994017	
1952	N1952	68	16.17	230.764813	
1953	N1953	63.997195	16.523998	231.129362	
1954	N1954	68	16.17	226.921604	
1955	N1955	66.332949	16.31743	238.092439	
1956	N1956	68	16.17	234.59401	
1957	N1957	68	16.17	237.726184	
1958	N1958	68	16.17	212.273816	
1959	N1959	52	17.585	237.693237	
1960	N1960	22	17.034842	0	
1961	N1961	20.047927	16.95798	0	
1962	N1962	32	17.427778	0	
1963	N1963	30	17.349167	0	

**Node Coordinates (Continued)**

	Label	X [ft]	Y [ft]	Z [ft]	Detach From Diaphragm
1964	N1964	15.987286	16.798377	0	
1965	N1965	14.987043	16.759065	0	
1966	N1966	14.96663	16.17	0	
1967	N1967	24	17.113348	0	
1968	N1968	18.377727	16.89233	0	
1969	N1969	26	17.191944	0	
1970	N1970	10.997996	16.602281	0	
1971	N1971	10	16.566942	0	
1972	N1972	10.954451	16.17	0	
1973	N1973	17.038267	16.839695	0	
1974	N1974	16.970563	17.504075	0	
1975	N1975	13.978826	16.719438	0	
1976	N1976	12.984721	16.680369	0	
1977	N1977	12.961481	17.188916	0	
1978	N1978	16.970563	16.17	0	
1979	N1979	11.976734	16.640751	0	
1980	N1980	10.954451	17.031142	0	
1981	N1981	12.961481	16.17	0	
1982	N1982	34	17.506389	0	
1983	N1983	28	17.270556	0	
1984	N1984	36	17.585	0	
1985	N1985	14.96663	17.346543	0	
1986	N1986	40	17.408125	0	
1987	N1987	42	17.319688	0	
1988	N1988	48	17.054491	0	
1989	N1989	49.952227	16.96803	0	
1990	N1990	38	17.496563	0	
1991	N1991	44	17.23125	0	
1992	N1992	46	17.142827	0	
1993	N1993	54.015397	16.788366	0	
1994	N1994	55.014457	16.744202	0	
1995	N1995	55.038519	17.316281	0	
1996	N1996	51.623479	16.894128	0	
1997	N1997	52.963202	16.834904	0	
1998	N1998	53.03337	16.17	0	
1999	N1999	56.023225	16.699596	0	
2000	N2000	57.001953	16.656319	0	
2001	N2001	57.045549	16.17	0	
2002	N2002	53.03337	17.493611	0	
2003	N2003	58	16.61655	0	
2004	N2004	57.045549	17.138784	0	
2005	N2005	66	16.258409	0	
2006	N2006	55.038519	16.17	0	
2007	N2007	22	17.034842	30	
2008	N2008	20.047927	16.95798	30	
2009	N2009	32	17.427778	30	
2010	N2010	30	17.349167	30	
2011	N2011	15.987286	16.798377	30	
2012	N2012	14.987043	16.759065	30	
2013	N2013	14.96663	16.17	30	
2014	N2014	24	17.113348	30	
2015	N2015	18.377727	16.89233	30	
2016	N2016	26	17.191944	30	
2017	N2017	10.997996	16.602281	30	
2018	N2018	10	16.566942	30	



**Node Coordinates (Continued)**

	Label	X [ft]	Y [ft]	Z [ft]	Detach From Diaphragm
2019	N2019	10.954451	16.17	30	
2020	N2020	17.038267	16.839695	30	
2021	N2021	16.970563	17.504075	30	
2022	N2022	13.978826	16.719438	30	
2023	N2023	12.984721	16.680369	30	
2024	N2024	12.961481	17.188916	30	
2025	N2025	16.970563	16.17	30	
2026	N2026	11.976734	16.640751	30	
2027	N2027	10.954451	17.031142	30	
2028	N2028	12.961481	16.17	30	
2029	N2029	34	17.506389	30	
2030	N2030	28	17.270556	30	
2031	N2031	36	17.585	30	
2032	N2032	14.96663	17.346543	30	
2033	N2033	40	17.408125	30	
2034	N2034	42	17.319688	30	
2035	N2035	48	17.054491	30	
2036	N2036	49.952227	16.96803	30	
2037	N2037	38	17.496563	30	
2038	N2038	44	17.23125	30	
2039	N2039	46	17.142827	30	
2040	N2040	54.015397	16.788366	30	
2041	N2041	55.014457	16.744202	30	
2042	N2042	55.038519	17.316281	30	
2043	N2043	51.623479	16.894128	30	
2044	N2044	52.963202	16.834904	30	
2045	N2045	53.03337	16.17	30	
2046	N2046	56.023225	16.699596	30	
2047	N2047	57.001953	16.656319	30	
2048	N2048	57.045549	16.17	30	
2049	N2049	53.03337	17.493611	30	
2050	N2050	58	16.61655	30	
2051	N2051	57.045549	17.138784	30	
2052	N2052	55.038519	16.17	30	
2053	N2053	22	17.034842	60	
2054	N2054	20.047927	16.95798	60	
2055	N2055	32	17.427778	60	
2056	N2056	30	17.349167	60	
2057	N2057	15.987286	16.798377	60	
2058	N2058	14.987043	16.759065	60	
2059	N2059	14.96663	16.17	60	
2060	N2060	24	17.113348	60	
2061	N2061	18.377727	16.89233	60	
2062	N2062	26	17.191944	60	
2063	N2063	10.997996	16.602281	60	
2064	N2064	10	16.566942	60	
2065	N2065	10.954451	16.17	60	
2066	N2066	17.038267	16.839695	60	
2067	N2067	16.970563	17.504075	60	
2068	N2068	13.978826	16.719438	60	
2069	N2069	12.984721	16.680369	60	
2070	N2070	12.961481	17.188916	60	
2071	N2071	16.970563	16.17	60	
2072	N2072	11.976734	16.640751	60	
2073	N2073	10.954451	17.031142	60	



**Node Coordinates (Continued)**

	Label	X [ft]	Y [ft]	Z [ft]	Detach From Diaphragm
2074	N2074	12.961481	16.17	60	
2075	N2075	34	17.506389	60	
2076	N2076	28	17.270556	60	
2077	N2077	36	17.585	60	
2078	N2078	14.96663	17.346543	60	
2079	N2079	40	17.408125	60	
2080	N2080	42	17.319688	60	
2081	N2081	48	17.054491	60	
2082	N2082	49.952227	16.96803	60	
2083	N2083	38	17.496563	60	
2084	N2084	44	17.23125	60	
2085	N2085	46	17.142827	60	
2086	N2086	54.015397	16.788366	60	
2087	N2087	55.014457	16.744202	60	
2088	N2088	55.038519	17.316281	60	
2089	N2089	51.623479	16.894128	60	
2090	N2090	52.963202	16.834904	60	
2091	N2091	53.03337	16.17	60	
2092	N2092	56.023225	16.699596	60	
2093	N2093	57.001953	16.656319	60	
2094	N2094	57.045549	16.17	60	
2095	N2095	53.03337	17.493611	60	
2096	N2096	58	16.61655	60	
2097	N2097	57.045549	17.138784	60	
2098	N2098	55.038519	16.17	60	
2099	N2099	22	17.034842	90	
2100	N2100	20.047927	16.95798	90	
2101	N2101	32	17.427778	90	
2102	N2102	30	17.349167	90	
2103	N2103	15.987286	16.798377	90	
2104	N2104	14.987043	16.759065	90	
2105	N2105	14.96663	16.17	90	
2106	N2106	24	17.113348	90	
2107	N2107	18.377727	16.89233	90	
2108	N2108	26	17.191944	90	
2109	N2109	10.997996	16.602281	90	
2110	N2110	10	16.566942	90	
2111	N2111	10.954451	16.17	90	
2112	N2112	17.038267	16.839695	90	
2113	N2113	16.970563	17.504075	90	
2114	N2114	13.978826	16.719438	90	
2115	N2115	12.984721	16.680369	90	
2116	N2116	12.961481	17.188916	90	
2117	N2117	16.970563	16.17	90	
2118	N2118	11.976734	16.640751	90	
2119	N2119	10.954451	17.031142	90	
2120	N2120	12.961481	16.17	90	
2121	N2121	34	17.506389	90	
2122	N2122	28	17.270556	90	
2123	N2123	36	17.585	90	
2124	N2124	14.96663	17.346543	90	
2125	N2125	40	17.408125	90	
2126	N2126	42	17.319688	90	
2127	N2127	48	17.054491	90	
2128	N2128	49.952227	16.96803	90	



**Node Coordinates (Continued)**

	Label	X [ft]	Y [ft]	Z [ft]	Detach From Diaphragm
2129	N2129	38	17.496563	90	
2130	N2130	44	17.23125	90	
2131	N2131	46	17.142827	90	
2132	N2132	54.015397	16.788366	90	
2133	N2133	55.014457	16.744202	90	
2134	N2134	55.038519	17.316281	90	
2135	N2135	51.623479	16.894128	90	
2136	N2136	52.963202	16.834904	90	
2137	N2137	53.03337	16.17	90	
2138	N2138	56.023225	16.699596	90	
2139	N2139	57.001953	16.656319	90	
2140	N2140	57.045549	16.17	90	
2141	N2141	53.03337	17.493611	90	
2142	N2142	58	16.61655	90	
2143	N2143	57.045549	17.138784	90	
2144	N2144	55.038519	16.17	90	
2145	N2145	22	17.034842	120	
2146	N2146	20.047927	16.95798	120	
2147	N2147	32	17.427778	120	
2148	N2148	30	17.349167	120	
2149	N2149	15.987286	16.798377	120	
2150	N2150	14.987043	16.759065	120	
2151	N2151	14.96663	16.17	120	
2152	N2152	24	17.113348	120	
2153	N2153	18.377727	16.89233	120	
2154	N2154	26	17.191944	120	
2155	N2155	10.997996	16.602281	120	
2156	N2156	10	16.566942	120	
2157	N2157	10.954451	16.17	120	
2158	N2158	17.038267	16.839695	120	
2159	N2159	16.970563	17.504075	120	
2160	N2160	13.978826	16.719438	120	
2161	N2161	12.984721	16.680369	120	
2162	N2162	12.961481	17.188916	120	
2163	N2163	16.970563	16.17	120	
2164	N2164	11.976734	16.640751	120	
2165	N2165	10.954451	17.031142	120	
2166	N2166	12.961481	16.17	120	
2167	N2167	34	17.506389	120	
2168	N2168	28	17.270556	120	
2169	N2169	36	17.585	120	
2170	N2170	14.96663	17.346543	120	
2171	N2171	40	17.408125	120	
2172	N2172	42	17.319688	120	
2173	N2173	48	17.054491	120	
2174	N2174	49.952227	16.96803	120	
2175	N2175	38	17.496563	120	
2176	N2176	44	17.23125	120	
2177	N2177	46	17.142827	120	
2178	N2178	54.015397	16.788366	120	
2179	N2179	55.014457	16.744202	120	
2180	N2180	55.038519	17.316281	120	
2181	N2181	51.623479	16.894128	120	
2182	N2182	52.963202	16.834904	120	
2183	N2183	53.03337	16.17	120	



**Node Coordinates (Continued)**

	Label	X [ft]	Y [ft]	Z [ft]	Detach From Diaphragm
2184	N2184	56.023225	16.699596	120	
2185	N2185	57.001953	16.656319	120	
2186	N2186	57.045549	16.17	120	
2187	N2187	53.03337	17.493611	120	
2188	N2188	58	16.61655	120	
2189	N2189	57.045549	17.138784	120	
2190	N2190	55.038519	16.17	120	
2191	N2191	22	17.034842	150	
2192	N2192	20.047927	16.95798	150	
2193	N2193	32	17.427778	150	
2194	N2194	30	17.349167	150	
2195	N2195	15.987286	16.798377	150	
2196	N2196	14.987043	16.759065	150	
2197	N2197	14.96663	16.17	150	
2198	N2198	24	17.113348	150	
2199	N2199	18.377727	16.89233	150	
2200	N2200	26	17.191944	150	
2201	N2201	10.997996	16.602281	150	
2202	N2202	10	16.566942	150	
2203	N2203	10.954451	16.17	150	
2204	N2204	17.038267	16.839695	150	
2205	N2205	16.970563	17.504075	150	
2206	N2206	13.978826	16.719438	150	
2207	N2207	12.984721	16.680369	150	
2208	N2208	12.961481	17.188916	150	
2209	N2209	16.970563	16.17	150	
2210	N2210	8.029191	16.485591	150	
2211	N2211	11.976734	16.640751	150	
2212	N2212	10.954451	17.031142	150	
2213	N2213	12.961481	16.17	150	
2214	N2214	6	16.405683	150	
2215	N2215	34	17.506389	150	
2216	N2216	28	17.270556	150	
2217	N2217	36	17.585	150	
2218	N2218	14.96663	17.346543	150	
2219	N2219	40	17.408125	150	
2220	N2220	42	17.319688	150	
2221	N2221	48	17.054491	150	
2222	N2222	49.952227	16.96803	150	
2223	N2223	38	17.496563	150	
2224	N2224	44	17.23125	150	
2225	N2225	46	17.142827	150	
2226	N2226	54.015397	16.788366	150	
2227	N2227	55.014457	16.744202	150	
2228	N2228	55.038519	17.316281	150	
2229	N2229	51.623479	16.894128	150	
2230	N2230	52.963202	16.834904	150	
2231	N2231	53.03337	16.17	150	
2232	N2232	56.023225	16.699596	150	
2233	N2233	57.001953	16.656319	150	
2234	N2234	57.045549	16.17	150	
2235	N2235	53.03337	17.493611	150	
2236	N2236	58	16.61655	150	
2237	N2237	57.045549	17.138784	150	
2238	N2238	55.038519	16.17	150	

**Node Coordinates (Continued)**

	Label	X [ft]	Y [ft]	Z [ft]	Detach From Diaphragm
2239	N2239	22	17.034842	180	
2240	N2240	20.047927	16.95798	180	
2241	N2241	32	17.427778	180	
2242	N2242	30	17.349167	180	
2243	N2243	15.987286	16.798377	180	
2244	N2244	14.987043	16.759065	180	
2245	N2245	14.96663	16.17	180	
2246	N2246	24	17.113348	180	
2247	N2247	18.377727	16.89233	180	
2248	N2248	26	17.191944	180	
2249	N2249	10.997996	16.602281	180	
2250	N2250	10	16.566942	180	
2251	N2251	10.954451	16.17	180	
2252	N2252	17.038267	16.839695	180	
2253	N2253	16.970563	17.504075	180	
2254	N2254	13.978826	16.719438	180	
2255	N2255	12.984721	16.680369	180	
2256	N2256	12.961481	17.188916	180	
2257	N2257	16.970563	16.17	180	
2258	N2258	11.976734	16.640751	180	
2259	N2259	10.954451	17.031142	180	
2260	N2260	12.961481	16.17	180	
2261	N2261	34	17.506389	180	
2262	N2262	28	17.270556	180	
2263	N2263	36	17.585	180	
2264	N2264	14.96663	17.346543	180	
2265	N2265	40	17.408125	180	
2266	N2266	42	17.319688	180	
2267	N2267	48	17.054491	180	
2268	N2268	49.952227	16.96803	180	
2269	N2269	38	17.496563	180	
2270	N2270	44	17.23125	180	
2271	N2271	46	17.142827	180	
2272	N2272	54.015397	16.788366	180	
2273	N2273	55.014457	16.744202	180	
2274	N2274	55.038519	17.316281	180	
2275	N2275	51.623479	16.894128	180	
2276	N2276	52.963202	16.834904	180	
2277	N2277	53.03337	16.17	180	
2278	N2278	56.023225	16.699596	180	
2279	N2279	57.001953	16.656319	180	
2280	N2280	57.045549	16.17	180	
2281	N2281	53.03337	17.493611	180	
2282	N2282	58	16.61655	180	
2283	N2283	57.045549	17.138784	180	
2284	N2284	55.038519	16.17	180	
2285	N2285	11.906309	16.637066	210	
2286	N2286	10.989048	16.601814	210	
2287	N2287	10.954451	16.17	210	
2288	N2288	16.970563	16.17	210	
2289	N2289	16.970563	17.504075	210	
2290	N2290	12.759161	16.67715	210	
2291	N2291	12.632719	17.163072	210	
2292	N2292	10	16.566883	210	
2293	N2293	10.954451	17.031142	210	

**Node Coordinates (Continued)**

	Label	X [ft]	Y [ft]	Z [ft]	Detach From Diaphragm
2294	N2294	13.2754	16.77802	210	
2295	N2295	13.2988	17.215433	210	
2296	N2296	14.96663	16.17	210	
2297	N2297	14.96663	17.346543	210	
2298	N2298	12.961481	16.17	210	
2299	N2299	55.038519	16.17	210	
2300	N2300	55.038519	17.316281	210	
2301	N2301	53.03337	16.17	210	
2302	N2302	53.03337	17.493611	210	
2303	N2303	57.048158	16.17	210	
2304	N2304	57.048158	17.138144	210	
2305	N2305	66	16.25846	210	
2306	N2306	40	17.408125	240	
2307	N2307	42	17.319688	240	
2308	N2308	48	17.054491	240	
2309	N2309	50	16.96803	240	
2310	N2310	38	17.496563	240	
2311	N2311	44	17.23125	240	
2312	N2312	46	17.142827	240	
2313	N2313	36	17.585	240	
2314	N2314	55	16.17	240	
2315	N2315	52	16.894128	240	
2316	N2316	53	17.493611	240	
2317	N2317	57	17.138784	240	
2318	N2318	53	16.17	240	
2319	N2319	60	16.52209	240	
2320	N2320	57	16.17	240	
2321	N2321	62	16.437876	240	
2322	N2322	64	16.347112	240	
2323	N2323	66	16.25846	240	
2324	N2324	55	17.316281	240	

**Member Primary Data**

	Label	I Node	J Node	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rule
1	M1	N3	N42	90	Top Track	Beam	CU	A653 SS Gr33	Top Track
2	M2	N42	N4	90	Top Track	Beam	CU	A653 SS Gr33	Top Track
3	M3	N48	N81	90	Stud	Column	CS	A653 SS Gr33	Stud
4	M4	N50	N82	90	Stud	Column	CS	A653 SS Gr33	Stud
5	M5	N52	N83	90	Stud	Column	CS	A653 SS Gr33	Stud
6	M6	N54	N84	90	Stud	Column	CS	A653 SS Gr33	Stud
7	M7	N56	N85	90	Stud	Column	CS	A653 SS Gr33	Stud
8	M8	N58	N86	90	Stud	Column	CS	A653 SS Gr33	Stud
9	M9	N60	N87	90	Stud	Column	CS	A653 SS Gr33	Stud
10	M10	N62	N88	90	Stud	Column	CS	A653 SS Gr33	Stud
11	M11	N64	N89	90	Stud	Column	CS	A653 SS Gr33	Stud
12	M12	N66	N90	90	Stud	Column	CS	A653 SS Gr33	Stud
13	M13	N68	N91	90	Stud	Column	CS	A653 SS Gr33	Stud
14	M14	N70	N92	90	Stud	Column	CS	A653 SS Gr33	Stud
15	M15	N72	N93	90	Stud	Column	CS	A653 SS Gr33	Stud
16	M16	N74	N94	90	Stud	Column	CS	A653 SS Gr33	Stud
17	M17	N76	N95	90	Stud	Column	CS	A653 SS Gr33	Stud
18	M18	N78	N96	90	Stud	Column	CS	A653 SS Gr33	Stud
19	M19	N80	N97	90	Stud	Column	CS	A653 SS Gr33	Stud
20	M20	N49	N98	90	Dbl Stud	Column	CS B-to-B	A653 SS Gr33	Dbl Stud
21	M21	N51	N99	90	Dbl Stud	Column	CS B-to-B	A653 SS Gr33	Dbl Stud

**Member Primary Data (Continued)**

	Label	I Node	J Node	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rule
22	M22	N53	N100	90	Dbl Stud	Column	CS B-to-B	A653 SS Gr33	Dbl Stud
23	M23	N55	N101	90	Dbl Stud	Column	CS B-to-B	A653 SS Gr33	Dbl Stud
24	M24	N57	N102	90	Dbl Stud	Column	CS B-to-B	A653 SS Gr33	Dbl Stud
25	M25	N59	N103	90	Dbl Stud	Column	CS B-to-B	A653 SS Gr33	Dbl Stud
26	M26	N61	N104	90	Dbl Stud	Column	CS B-to-B	A653 SS Gr33	Dbl Stud
27	M27	N63	N105	90	Dbl Stud	Column	CS B-to-B	A653 SS Gr33	Dbl Stud
28	M28	N65	N42	90	Dbl Stud	Column	CS B-to-B	A653 SS Gr33	Dbl Stud
29	M29	N67	N106	90	Dbl Stud	Column	CS B-to-B	A653 SS Gr33	Dbl Stud
30	M30	N69	N107	90	Dbl Stud	Column	CS B-to-B	A653 SS Gr33	Dbl Stud
31	M31	N71	N108	90	Dbl Stud	Column	CS B-to-B	A653 SS Gr33	Dbl Stud
32	M32	N73	N109	90	Dbl Stud	Column	CS B-to-B	A653 SS Gr33	Dbl Stud
33	M33	N75	N110	90	Dbl Stud	Column	CS B-to-B	A653 SS Gr33	Dbl Stud
34	M34	N77	N111	90	Dbl Stud	Column	CS B-to-B	A653 SS Gr33	Dbl Stud
35	M35	N79	N112	90	Dbl Stud	Column	CS B-to-B	A653 SS Gr33	Dbl Stud
36	M36	N3	N4	90	Load Track	Beam	CU	A653 SS Gr33	Load Track
37	M37	N133	N163	90	Stud	Column	CS	A653 SS Gr33	Stud
38	M38	N129	N136	90	Stud	Column	CS	A653 SS Gr33	Stud
39	M39	N132	N160	90	Dbl Stud	Column	CS B-to-B	A653 SS Gr33	Dbl Stud
40	M40	N144	N122	90	Stud	Column	CS	A653 SS Gr33	Stud
41	M41	N125	N156	90	Dbl Stud	Column	CS B-to-B	A653 SS Gr33	Dbl Stud
42	M42	N40	N7	90	Top Track	Beam	CU	A653 SS Gr33	Top Track
43	M43	N115	N158	90	Stud	Column	CS	A653 SS Gr33	Stud
44	M44	N150	N177	90	Stud	Column	CS	A653 SS Gr33	Stud
45	M45	N8	N40	90	Top Track	Beam	CU	A653 SS Gr33	Top Track
46	M46	N117	N154	90	Stud	Column	CS	A653 SS Gr33	Stud
47	M47	N123	N157	90	Dbl Stud	Column	CS B-to-B	A653 SS Gr33	Dbl Stud
48	M48	N113	N162	90	Dbl Stud	Column	CS B-to-B	A653 SS Gr33	Dbl Stud
49	M49	N127	N161	90	Stud	Column	CS	A653 SS Gr33	Stud
50	M50	N142	N171	90	Stud	Column	CS	A653 SS Gr33	Stud
51	M51	N124	N167	90	Stud	Column	CS	A653 SS Gr33	Stud
52	M52	N126	N164	90	Dbl Stud	Column	CS B-to-B	A653 SS Gr33	Dbl Stud
53	M53	N145	N116	90	Dbl Stud	Column	CS B-to-B	A653 SS Gr33	Dbl Stud
54	M54	N139	N168	90	Dbl Stud	Column	CS B-to-B	A653 SS Gr33	Dbl Stud
55	M55	N138	N166	90	Dbl Stud	Column	CS B-to-B	A653 SS Gr33	Dbl Stud
56	M56	N137	N165	90	Stud	Column	CS	A653 SS Gr33	Stud
57	M57	N140	N169	90	Stud	Column	CS	A653 SS Gr33	Stud
58	M58	N141	N170	90	Dbl Stud	Column	CS B-to-B	A653 SS Gr33	Dbl Stud
59	M59	N143	N172	90	Dbl Stud	Column	CS B-to-B	A653 SS Gr33	Dbl Stud
60	M60	N146	N173	90	Stud	Column	CS	A653 SS Gr33	Stud
61	M61	N147	N174	90	Dbl Stud	Column	CS B-to-B	A653 SS Gr33	Dbl Stud
62	M62	N148	N175	90	Stud	Column	CS	A653 SS Gr33	Stud
63	M63	N149	N176	90	Dbl Stud	Column	CS B-to-B	A653 SS Gr33	Dbl Stud
64	M64	N114	N151	90	Stud	Column	CS	A653 SS Gr33	Stud
65	M65	N120	N153	90	Stud	Column	CS	A653 SS Gr33	Stud
66	M66	N134	N40	90	Dbl Stud	Column	CS B-to-B	A653 SS Gr33	Dbl Stud
67	M67	N121	N155	90	Stud	Column	CS	A653 SS Gr33	Stud
68	M68	N119	N118	90	Dbl Stud	Column	CS B-to-B	A653 SS Gr33	Dbl Stud
69	M69	N130	N152	90	Stud	Column	CS	A653 SS Gr33	Stud
70	M70	N131	N135	90	Dbl Stud	Column	CS B-to-B	A653 SS Gr33	Dbl Stud
71	M71	N128	N159	90	Dbl Stud	Column	CS B-to-B	A653 SS Gr33	Dbl Stud
72	M72	N8	N7	90	Load Track	Beam	CU	A653 SS Gr33	Load Track
73	M73	N204	N180	90	Stud	Column	CS	A653 SS Gr33	Stud
74	M74	N192	N223	90	Stud	Column	CS	A653 SS Gr33	Stud
75	M75	N217	N240	90	Stud	Column	CS	A653 SS Gr33	Stud
76	M76	N189	N226	90	Stud	Column	CS	A653 SS Gr33	Stud

**Member Primary Data (Continued)**

	Label	I Node	J Node	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rule
77	M77	N191	N238	90	Stud	Column	CS	A653 SS Gr33	Stud
78	M78	N198	N224	90	Dbl Stud	Column	CS B-to-B	A653 SS Gr33	Dbl Stud
79	M79	N213	N236	90	Stud	Column	CS	A653 SS Gr33	Stud
80	M80	N219	N242	90	Stud	Column	CS	A653 SS Gr33	Stud
81	M81	N214	N237	90	Dbl Stud	Column	CS B-to-B	A653 SS Gr33	Dbl Stud
82	M82	N210	N232	90	Dbl Stud	Column	CS B-to-B	A653 SS Gr33	Dbl Stud
83	M83	N201	N206	90	Stud	Column	CS	A653 SS Gr33	Stud
84	M84	N184	N233	90	Stud	Column	CS	A653 SS Gr33	Stud
85	M85	N183	N227	90	Dbl Stud	Column	CS B-to-B	A653 SS Gr33	Dbl Stud
86	M86	N215	N186	90	Stud	Column	CS	A653 SS Gr33	Stud
87	M87	N188	N220	90	Stud	Column	CS	A653 SS Gr33	Stud
88	M88	N10	N39	90	Top Track	Beam	CU	A653 SS Gr33	Top Track
89	M89	N39	N11	90	Top Track	Beam	CU	A653 SS Gr33	Top Track
90	M90	N197	N225	90	Dbl Stud	Column	CS B-to-B	A653 SS Gr33	Dbl Stud
91	M91	N187	N229	90	Dbl Stud	Column	CS B-to-B	A653 SS Gr33	Dbl Stud
92	M92	N181	N228	90	Stud	Column	CS	A653 SS Gr33	Stud
93	M93	N199	N230	90	Dbl Stud	Column	CS B-to-B	A653 SS Gr33	Dbl Stud
94	M94	N185	N190	90	Dbl Stud	Column	CS B-to-B	A653 SS Gr33	Dbl Stud
95	M95	N178	N234	90	Dbl Stud	Column	CS B-to-B	A653 SS Gr33	Dbl Stud
96	M96	N208	N231	90	Stud	Column	CS	A653 SS Gr33	Stud
97	M97	N211	N235	90	Stud	Column	CS	A653 SS Gr33	Stud
98	M98	N212	N207	90	Dbl Stud	Column	CS B-to-B	A653 SS Gr33	Dbl Stud
99	M99	N216	N239	90	Dbl Stud	Column	CS B-to-B	A653 SS Gr33	Dbl Stud
100	M100	N209	N241	90	Dbl Stud	Column	CS B-to-B	A653 SS Gr33	Dbl Stud
101	M101	N195	N222	90	Stud	Column	CS	A653 SS Gr33	Stud
102	M102	N205	N39	90	Dbl Stud	Column	CS B-to-B	A653 SS Gr33	Dbl Stud
103	M103	N196	N218	90	Stud	Column	CS	A653 SS Gr33	Stud
104	M104	N194	N193	90	Dbl Stud	Column	CS B-to-B	A653 SS Gr33	Dbl Stud
105	M105	N202	N221	90	Stud	Column	CS	A653 SS Gr33	Stud
106	M106	N203	N179	90	Dbl Stud	Column	CS B-to-B	A653 SS Gr33	Dbl Stud
107	M107	N200	N182	90	Dbl Stud	Column	CS B-to-B	A653 SS Gr33	Dbl Stud
108	M108	N10	N11	90	Load Track	Beam	CU	A653 SS Gr33	Load Track
109	M109	N267	N301	90	Stud	Column	CS	A653 SS Gr33	Stud
110	M110	N268	N271	90	Dbl Stud	Column	CS B-to-B	A653 SS Gr33	Dbl Stud
111	M111	N260	N305	90	Stud	Column	CS	A653 SS Gr33	Stud
112	M112	N285	N300	90	Dbl Stud	Column	CS B-to-B	A653 SS Gr33	Dbl Stud
113	M113	N274	N294	90	Dbl Stud	Column	CS B-to-B	A653 SS Gr33	Dbl Stud
114	M114	N282	N264	90	Stud	Column	CS	A653 SS Gr33	Stud
115	M115	N257	N292	90	Stud	Column	CS	A653 SS Gr33	Stud
116	M116	N259	N255	90	Stud	Column	CS	A653 SS Gr33	Stud
117	M117	N287	N304	90	Stud	Column	CS	A653 SS Gr33	Stud
118	M118	N270	N295	90	Stud	Column	CS	A653 SS Gr33	Stud
119	M119	N276	N293	90	Dbl Stud	Column	CS B-to-B	A653 SS Gr33	Dbl Stud
120	M120	N244	N307	90	Stud	Column	CS	A653 SS Gr33	Stud
121	M121	N288	N251	90	Dbl Stud	Column	CS B-to-B	A653 SS Gr33	Dbl Stud
122	M122	N279	N284	90	Stud	Column	CS	A653 SS Gr33	Stud
123	M123	N266	N247	90	Dbl Stud	Column	CS B-to-B	A653 SS Gr33	Dbl Stud
124	M124	N289	N246	90	Stud	Column	CS	A653 SS Gr33	Stud
125	M125	N286	N303	90	Stud	Column	CS	A653 SS Gr33	Stud
126	M126	N252	N299	90	Stud	Column	CS	A653 SS Gr33	Stud
127	M127	N245	N248	90	Stud	Column	CS	A653 SS Gr33	Stud
128	M128	N14	N43	90	Top Track	Beam	CU	A653 SS Gr33	Top Track
129	M129	N43	N15	90	Top Track	Beam	CU	A653 SS Gr33	Top Track
130	M130	N269	N297	90	Dbl Stud	Column	CS B-to-B	A653 SS Gr33	Dbl Stud
131	M131	N265	N296	90	Stud	Column	CS	A653 SS Gr33	Stud

**Member Primary Data (Continued)**

	Label	I Node	J Node	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rule
132	M132	N277	N298	90	Dbl Stud	Column	CS B-to-B	A653 SS Gr33	Dbl Stud
133	M133	N262	N302	90	Dbl Stud	Column	CS B-to-B	A653 SS Gr33	Dbl Stud
134	M134	N254	N249	90	Dbl Stud	Column	CS B-to-B	A653 SS Gr33	Dbl Stud
135	M135	N290	N261	90	Dbl Stud	Column	CS B-to-B	A653 SS Gr33	Dbl Stud
136	M136	N253	N306	90	Dbl Stud	Column	CS B-to-B	A653 SS Gr33	Dbl Stud
137	M137	N273	N256	90	Stud	Column	CS	A653 SS Gr33	Stud
138	M138	N283	N43	90	Dbl Stud	Column	CS B-to-B	A653 SS Gr33	Dbl Stud
139	M139	N243	N275	90	Stud	Column	CS	A653 SS Gr33	Stud
140	M140	N272	N258	90	Dbl Stud	Column	CS B-to-B	A653 SS Gr33	Dbl Stud
141	M141	N280	N291	90	Stud	Column	CS	A653 SS Gr33	Stud
142	M142	N281	N263	90	Dbl Stud	Column	CS B-to-B	A653 SS Gr33	Dbl Stud
143	M143	N278	N250	90	Dbl Stud	Column	CS B-to-B	A653 SS Gr33	Dbl Stud
144	M144	N14	N15	90	Load Track	Beam	CU	A653 SS Gr33	Load Track
145	M145	N354	N341	90	Dbl Stud	Column	CS B-to-B	A653 SS Gr33	Dbl Stud
146	M146	N344	N322	90	Dbl Stud	Column	CS B-to-B	A653 SS Gr33	Dbl Stud
147	M147	N359	N370	90	Stud	Column	CS	A653 SS Gr33	Stud
148	M148	N353	N363	90	Dbl Stud	Column	CS B-to-B	A653 SS Gr33	Dbl Stud
149	M149	N335	N334	90	Dbl Stud	Column	CS B-to-B	A653 SS Gr33	Dbl Stud
150	M150	N348	N367	90	Stud	Column	CS	A653 SS Gr33	Stud
151	M151	N336	N328	90	Dbl Stud	Column	CS B-to-B	A653 SS Gr33	Dbl Stud
152	M152	N346	N371	90	Stud	Column	CS	A653 SS Gr33	Stud
153	M153	N309	N315	90	Dbl Stud	Column	CS B-to-B	A653 SS Gr33	Dbl Stud
154	M154	N314	N364	90	Dbl Stud	Column	CS B-to-B	A653 SS Gr33	Dbl Stud
155	M155	N18	N19	90	Load Track	Beam	CU	A653 SS Gr33	Load Track
156	M156	N356	N310	90	Stud	Column	CS	A653 SS Gr33	Stud
157	M157	N342	N362	90	Stud	Column	CS	A653 SS Gr33	Stud
158	M158	N317	N313	90	Stud	Column	CS	A653 SS Gr33	Stud
159	M159	N349	N325	90	Stud	Column	CS	A653 SS Gr33	Stud
160	M160	N323	N368	90	Dbl Stud	Column	CS B-to-B	A653 SS Gr33	Dbl Stud
161	M161	N330	N372	90	Stud	Column	CS	A653 SS Gr33	Stud
162	M162	N316	N333	90	Dbl Stud	Column	CS B-to-B	A653 SS Gr33	Dbl Stud
163	M163	N329	N358	90	Stud	Column	CS	A653 SS Gr33	Stud
164	M164	N347	N331	90	Dbl Stud	Column	CS B-to-B	A653 SS Gr33	Dbl Stud
165	M165	N311	N339	90	Stud	Column	CS	A653 SS Gr33	Stud
166	M166	N312	N369	90	Stud	Column	CS	A653 SS Gr33	Stud
167	M167	N343	N324	90	Stud	Column	CS	A653 SS Gr33	Stud
168	M168	N338	N340	90	Stud	Column	CS	A653 SS Gr33	Stud
169	M169	N18	N44	90	Top Track	Beam	CU	A653 SS Gr33	Top Track
170	M170	N44	N19	90	Top Track	Beam	CU	A653 SS Gr33	Top Track
171	M171	N327	N365	90	Dbl Stud	Column	CS B-to-B	A653 SS Gr33	Dbl Stud
172	M172	N319	N320	90	Stud	Column	CS	A653 SS Gr33	Stud
173	M173	N321	N366	90	Dbl Stud	Column	CS B-to-B	A653 SS Gr33	Dbl Stud
174	M174	N360	N326	90	Dbl Stud	Column	CS B-to-B	A653 SS Gr33	Dbl Stud
175	M175	N351	N345	90	Stud	Column	CS	A653 SS Gr33	Stud
176	M176	N357	N44	90	Dbl Stud	Column	CS B-to-B	A653 SS Gr33	Dbl Stud
177	M177	N337	N352	90	Stud	Column	CS	A653 SS Gr33	Stud
178	M178	N350	N318	90	Dbl Stud	Column	CS B-to-B	A653 SS Gr33	Dbl Stud
179	M179	N332	N361	90	Stud	Column	CS	A653 SS Gr33	Stud
180	M180	N355	N308	90	Dbl Stud	Column	CS B-to-B	A653 SS Gr33	Dbl Stud
181	M181	N397	N420	90	Stud	Column	CS	A653 SS Gr33	Stud
182	M182	N22	N45	90	Top Track	Beam	CU	A653 SS Gr33	Top Track
183	M183	N417	N380	90	Stud	Column	CS	A653 SS Gr33	Stud
184	M184	N425	N415	90	Dbl Stud	Column	CS B-to-B	A653 SS Gr33	Dbl Stud
185	M185	N374	N385	90	Stud	Column	CS	A653 SS Gr33	Stud
186	M186	N418	N436	90	Stud	Column	CS	A653 SS Gr33	Stud

**Member Primary Data (Continued)**

	Label	I Node	J Node	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rule
187	M187	N389	N396	90	Stud	Column	CS	A653 SS Gr33	Stud
188	M188	N419	N408	90	Dbl Stud	Column	CS B-to-B	A653 SS Gr33	Dbl Stud
189	M189	N424	N432	90	Dbl Stud	Column	CS B-to-B	A653 SS Gr33	Dbl Stud
190	M190	N391	N384	90	Dbl Stud	Column	CS B-to-B	A653 SS Gr33	Dbl Stud
191	M191	N406	N434	90	Stud	Column	CS	A653 SS Gr33	Stud
192	M192	N413	N394	90	Dbl Stud	Column	CS B-to-B	A653 SS Gr33	Dbl Stud
193	M193	N421	N416	90	Stud	Column	CS	A653 SS Gr33	Stud
194	M194	N402	N373	90	Dbl Stud	Column	CS B-to-B	A653 SS Gr33	Dbl Stud
195	M195	N403	N387	90	Dbl Stud	Column	CS B-to-B	A653 SS Gr33	Dbl Stud
196	M196	N381	N400	90	Stud	Column	CS	A653 SS Gr33	Stud
197	M197	N22	N23	90	Load Track	Beam	CU	A653 SS Gr33	Load Track
198	M198	N388	N431	90	Stud	Column	CS	A653 SS Gr33	Stud
199	M199	N423	N377	90	Stud	Column	CS	A653 SS Gr33	Stud
200	M200	N409	N399	90	Dbl Stud	Column	CS B-to-B	A653 SS Gr33	Dbl Stud
201	M201	N398	N437	90	Stud	Column	CS	A653 SS Gr33	Stud
202	M202	N404	N376	90	Dbl Stud	Column	CS B-to-B	A653 SS Gr33	Dbl Stud
203	M203	N378	N428	90	Stud	Column	CS	A653 SS Gr33	Stud
204	M204	N422	N411	90	Dbl Stud	Column	CS B-to-B	A653 SS Gr33	Dbl Stud
205	M205	N392	N390	90	Stud	Column	CS	A653 SS Gr33	Stud
206	M206	N379	N435	90	Stud	Column	CS	A653 SS Gr33	Stud
207	M207	N382	N414	90	Stud	Column	CS	A653 SS Gr33	Stud
208	M208	N45	N23	90	Top Track	Beam	CU	A653 SS Gr33	Top Track
209	M209	N395	N386	90	Dbl Stud	Column	CS B-to-B	A653 SS Gr33	Dbl Stud
210	M210	N383	N393	90	Stud	Column	CS	A653 SS Gr33	Stud
211	M211	N407	N433	90	Dbl Stud	Column	CS B-to-B	A653 SS Gr33	Dbl Stud
212	M212	N429	N410	90	Dbl Stud	Column	CS B-to-B	A653 SS Gr33	Dbl Stud
213	M213	N427	N45	90	Dbl Stud	Column	CS B-to-B	A653 SS Gr33	Dbl Stud
214	M214	N375	N405	90	Dbl Stud	Column	CS B-to-B	A653 SS Gr33	Dbl Stud
215	M215	N412	N430	90	Stud	Column	CS	A653 SS Gr33	Stud
216	M216	N426	N401	90	Dbl Stud	Column	CS B-to-B	A653 SS Gr33	Dbl Stud
217	M217	N478	N467	90	Stud	Column	CS	A653 SS Gr33	Stud
218	M218	N489	N485	90	Dbl Stud	Column	CS B-to-B	A653 SS Gr33	Dbl Stud
219	M219	N460	N442	90	Dbl Stud	Column	CS B-to-B	A653 SS Gr33	Dbl Stud
220	M220	N441	N499	90	Dbl Stud	Column	CS B-to-B	A653 SS Gr33	Dbl Stud
221	M221	N476	N446	90	Stud	Column	CS	A653 SS Gr33	Stud
222	M222	N472	N444	90	Dbl Stud	Column	CS B-to-B	A653 SS Gr33	Dbl Stud
223	M223	N463	N439	90	Dbl Stud	Column	CS B-to-B	A653 SS Gr33	Dbl Stud
224	M224	N487	N456	90	Dbl Stud	Column	CS B-to-B	A653 SS Gr33	Dbl Stud
225	M225	N461	N481	90	Dbl Stud	Column	CS B-to-B	A653 SS Gr33	Dbl Stud
226	M226	N470	N468	90	Dbl Stud	Column	CS B-to-B	A653 SS Gr33	Dbl Stud
227	M227	N452	N480	90	Dbl Stud	Column	CS B-to-B	A653 SS Gr33	Dbl Stud
228	M228	N471	N448	90	Stud	Column	CS	A653 SS Gr33	Stud
229	M229	N445	N458	90	Dbl Stud	Column	CS B-to-B	A653 SS Gr33	Dbl Stud
230	M230	N483	N474	90	Stud	Column	CS	A653 SS Gr33	Stud
231	M231	N26	N41	90	Top Track	Beam	CU	A653 SS Gr33	Top Track
232	M232	N493	N475	90	Stud	Column	CS	A653 SS Gr33	Stud
233	M233	N464	N502	90	Stud	Column	CS	A653 SS Gr33	Stud
234	M234	N462	N455	90	Stud	Column	CS	A653 SS Gr33	Stud
235	M235	N451	N438	90	Dbl Stud	Column	CS B-to-B	A653 SS Gr33	Dbl Stud
236	M236	N447	N501	90	Stud	Column	CS	A653 SS Gr33	Stud
237	M237	N490	N457	90	Dbl Stud	Column	CS B-to-B	A653 SS Gr33	Dbl Stud
238	M238	N449	N492	90	Stud	Column	CS	A653 SS Gr33	Stud
239	M239	N486	N482	90	Dbl Stud	Column	CS B-to-B	A653 SS Gr33	Dbl Stud
240	M240	N26	N27	90	Load Track	Beam	CU	A653 SS Gr33	Load Track
241	M241	N479	N498	90	Stud	Column	CS	A653 SS Gr33	Stud

**Member Primary Data (Continued)**

	Label	I Node	J Node	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rule
242	M242	N494	N466	90	Stud	Column	CS	A653 SS Gr33	Stud
243	M243	N484	N443	90	Stud	Column	CS	A653 SS Gr33	Stud
244	M244	N469	N496	90	Stud	Column	CS	A653 SS Gr33	Stud
245	M245	N465	N453	90	Stud	Column	CS	A653 SS Gr33	Stud
246	M246	N473	N440	90	Stud	Column	CS	A653 SS Gr33	Stud
247	M247	N477	N491	90	Stud	Column	CS	A653 SS Gr33	Stud
248	M248	N41	N27	90	Top Track	Beam	CU	A653 SS Gr33	Top Track
249	M249	N488	N500	90	Dbl Stud	Column	CS B-to-B	A653 SS Gr33	Dbl Stud
250	M250	N450	N41	90	Dbl Stud	Column	CS B-to-B	A653 SS Gr33	Dbl Stud
251	M251	N454	N497	90	Stud	Column	CS	A653 SS Gr33	Stud
252	M252	N495	N459	90	Dbl Stud	Column	CS B-to-B	A653 SS Gr33	Dbl Stud
253	M253	N541	N511	90	Stud	Column	CS	A653 SS Gr33	Stud
254	M254	N505	N564	90	Dbl Stud	Column	CS B-to-B	A653 SS Gr33	Dbl Stud
255	M255	N46	N31	90	Top Track	Beam	CU	A653 SS Gr33	Top Track
256	M256	N562	N565	90	Dbl Stud	Column	CS B-to-B	A653 SS Gr33	Dbl Stud
257	M257	N557	N513	90	Stud	Column	CS	A653 SS Gr33	Stud
258	M258	N533	N518	90	Dbl Stud	Column	CS B-to-B	A653 SS Gr33	Dbl Stud
259	M259	N514	N46	90	Dbl Stud	Column	CS B-to-B	A653 SS Gr33	Dbl Stud
260	M260	N526	N547	90	Stud	Column	CS	A653 SS Gr33	Stud
261	M261	N507	N534	90	Stud	Column	CS	A653 SS Gr33	Stud
262	M262	N560	N520	90	Stud	Column	CS	A653 SS Gr33	Stud
263	M263	N512	N532	90	Dbl Stud	Column	CS B-to-B	A653 SS Gr33	Dbl Stud
264	M264	N551	N522	90	Dbl Stud	Column	CS B-to-B	A653 SS Gr33	Dbl Stud
265	M265	N553	N543	90	Dbl Stud	Column	CS B-to-B	A653 SS Gr33	Dbl Stud
266	M266	N516	N549	90	Dbl Stud	Column	CS B-to-B	A653 SS Gr33	Dbl Stud
267	M267	N542	N561	90	Dbl Stud	Column	CS B-to-B	A653 SS Gr33	Dbl Stud
268	M268	N555	N554	90	Dbl Stud	Column	CS B-to-B	A653 SS Gr33	Dbl Stud
269	M269	N537	N550	90	Dbl Stud	Column	CS B-to-B	A653 SS Gr33	Dbl Stud
270	M270	N30	N46	90	Top Track	Beam	CU	A653 SS Gr33	Top Track
271	M271	N530	N558	90	Stud	Column	CS	A653 SS Gr33	Stud
272	M272	N517	N566	90	Stud	Column	CS	A653 SS Gr33	Stud
273	M273	N515	N536	90	Stud	Column	CS	A653 SS Gr33	Stud
274	M274	N552	N548	90	Stud	Column	CS	A653 SS Gr33	Stud
275	M275	N535	N509	90	Dbl Stud	Column	CS B-to-B	A653 SS Gr33	Dbl Stud
276	M276	N546	N510	90	Stud	Column	CS	A653 SS Gr33	Stud
277	M277	N525	N529	90	Dbl Stud	Column	CS B-to-B	A653 SS Gr33	Dbl Stud
278	M278	N504	N527	90	Stud	Column	CS	A653 SS Gr33	Stud
279	M279	N523	N524	90	Dbl Stud	Column	CS B-to-B	A653 SS Gr33	Dbl Stud
280	M280	N30	N37	90	Load Track	Beam	CU	A653 SS Gr33	Load Track
281	M281	N508	N545	90	Stud	Column	CS	A653 SS Gr33	Stud
282	M282	N528	N539	90	Stud	Column	CS	A653 SS Gr33	Stud
283	M283	N519	N538	90	Stud	Column	CS	A653 SS Gr33	Stud
284	M284	N556	N544	90	Stud	Column	CS	A653 SS Gr33	Stud
285	M285	N559	N563	90	Stud	Column	CS	A653 SS Gr33	Stud
286	M286	N506	N503	90	Stud	Column	CS	A653 SS Gr33	Stud
287	M287	N531	N521	90	Dbl Stud	Column	CS B-to-B	A653 SS Gr33	Dbl Stud
288	M288	N570	N47	90	Dbl Stud	Column	CS B-to-B	A653 SS Gr33	Dbl Stud
289	M289	N584	N576	90	Dbl Stud	Column	CS B-to-B	A653 SS Gr33	Dbl Stud
290	M290	N571	N572	90	Stud	Column	CS	A653 SS Gr33	Stud
291	M291	N578	N597	90	Stud	Column	CS	A653 SS Gr33	Stud
292	M292	N591	N580	90	Dbl Stud	Column	CS B-to-B	A653 SS Gr33	Dbl Stud
293	M293	N586	N593	90	Stud	Column	CS	A653 SS Gr33	Stud
294	M294	N47	N35	90	Top Track	Beam	CU	A653 SS Gr33	Top Track
295	M295	N577	N583	90	Stud	Column	CS	A653 SS Gr33	Stud
296	M296	N573	N585	90	Dbl Stud	Column	CS B-to-B	A653 SS Gr33	Dbl Stud



**Member Primary Data (Continued)**

	Label	I Node	J Node	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rule
297	M297	N581	N590	90	Dbl Stud	Column	CS B-to-B	A653 SS Gr33	Dbl Stud
298	M298	N595	N569	90	Dbl Stud	Column	CS B-to-B	A653 SS Gr33	Dbl Stud
299	M299	N592	N594	90	Dbl Stud	Column	CS B-to-B	A653 SS Gr33	Dbl Stud
300	M300	N589	N568	90	Stud	Column	CS	A653 SS Gr33	Stud
301	M301	N587	N582	90	Dbl Stud	Column	CS B-to-B	A653 SS Gr33	Dbl Stud
302	M302	N579	N588	90	Stud	Column	CS	A653 SS Gr33	Stud
303	M303	N567	N575	90	Stud	Column	CS	A653 SS Gr33	Stud
304	M304	N596	N574	90	Stud	Column	CS	A653 SS Gr33	Stud
305	M305	N598	N47	90	Top Track	Beam	CU	A653 SS Gr33	Top Track
306	M306	N599	N606	90	Stud	Column	CS	A653 SS Gr33	Stud
307	M307	N601	N607	90	Stud	Column	CS	A653 SS Gr33	Stud
308	M308	N603	N608	90	Stud	Column	CS	A653 SS Gr33	Stud
309	M309	N605	N609	90	Stud	Column	CS	A653 SS Gr33	Stud
310	M310	N600	N610	90	Dbl Stud	Column	CS B-to-B	A653 SS Gr33	Dbl Stud
311	M311	N602	N611	90	Dbl Stud	Column	CS B-to-B	A653 SS Gr33	Dbl Stud
312	M312	N604	N612	90	Dbl Stud	Column	CS B-to-B	A653 SS Gr33	Dbl Stud
313	M313	N34	N35	90	Load Track	Beam	CU	A653 SS Gr33	Load Track
314	M314	N3	N8	90	Load Track	Beam	CU	A653 SS Gr33	Load Track
315	M315	N8	N10	90	Load Track	Beam	CU	A653 SS Gr33	Load Track
316	M316	N10	N14	90	Load Track	Beam	CU	A653 SS Gr33	Load Track
317	M317	N14	N18	90	Load Track	Beam	CU	A653 SS Gr33	Load Track
318	M318	N18	N22	90	Load Track	Beam	CU	A653 SS Gr33	Load Track
319	M319	N22	N26	90	Load Track	Beam	CU	A653 SS Gr33	Load Track
320	M320	N26	N30	90	Load Track	Beam	CU	A653 SS Gr33	Load Track
321	M321	N540	N598	90	Load Track	Beam	CU	A653 SS Gr33	Load Track
322	M322	N4	N7	90	Load Track	Beam	CU	A653 SS Gr33	Load Track
323	M323	N7	N11	90	Load Track	Beam	CU	A653 SS Gr33	Load Track
324	M324	N11	N15	90	Load Track	Beam	CU	A653 SS Gr33	Load Track
325	M325	N15	N19	90	Load Track	Beam	CU	A653 SS Gr33	Load Track
326	M326	N19	N23	90	Load Track	Beam	CU	A653 SS Gr33	Load Track
327	M327	N23	N27	90	Load Track	Beam	CU	A653 SS Gr33	Load Track
328	M328	N27	N31	90	Load Track	Beam	CU	A653 SS Gr33	Load Track
329	M329	N31	N35	90	Load Track	Beam	CU	A653 SS Gr33	Load Track
330	M330	N98	N156		Purlin	Beam	CS	A653 SS Gr50/1	Purlin
331	M331	N99	N118		Purlin	Beam	CS	A653 SS Gr50/1	Purlin
332	M332	N100	N135		Purlin	Beam	CS	A653 SS Gr50/1	Purlin
333	M333	N101	N157		Purlin	Beam	CS	A653 SS Gr50/1	Purlin
334	M334	N102	N159		Purlin	Beam	CS	A653 SS Gr50/1	Purlin
335	M335	N103	N160		Purlin	Beam	CS	A653 SS Gr50/1	Purlin
336	M336	N104	N162		Purlin	Beam	CS	A653 SS Gr50/1	Purlin
337	M337	N105	N164		Purlin	Beam	CS	A653 SS Gr50/1	Purlin
338	M338	N42	N40		Ridge Purlin	Beam	CS B-to-B	A653 SS Gr50/1	Ridge Purlin
339	M339	N106	N166	180	Purlin	Beam	CS	A653 SS Gr50/1	Purlin
340	M340	N107	N168	180	Purlin	Beam	CS	A653 SS Gr50/1	Purlin
341	M341	N108	N170	180	Purlin	Beam	CS	A653 SS Gr50/1	Purlin
342	M342	N109	N172	180	Purlin	Beam	CS	A653 SS Gr50/1	Purlin
343	M343	N110	N116	180	Purlin	Beam	CS	A653 SS Gr50/1	Purlin
344	M344	N111	N174	180	Purlin	Beam	CS	A653 SS Gr50/1	Purlin
345	M346	N166	N232	180	Purlin	Beam	CS	A653 SS Gr50/1	Purlin
346	M347	N160	N227		Purlin	Beam	CS	A653 SS Gr50/1	Purlin
347	M348	N157	N225		Purlin	Beam	CS	A653 SS Gr50/1	Purlin
348	M349	N170	N207	180	Purlin	Beam	CS	A653 SS Gr50/1	Purlin
349	M350	N116	N190	180	Purlin	Beam	CS	A653 SS Gr50/1	Purlin
350	M351	N118	N193		Purlin	Beam	CS	A653 SS Gr50/1	Purlin
351	M352	N40	N39		Ridge Purlin	Beam	CS B-to-B	A653 SS Gr50/1	Ridge Purlin

**Member Primary Data (Continued)**

	Label	I Node	J Node	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rule
352	M353	N172	N237	180	Purlin	Beam	CS	A653 SS Gr50/1	Purlin
353	M354	N156	N224		Purlin	Beam	CS	A653 SS Gr50/1	Purlin
354	M355	N135	N179		Purlin	Beam	CS	A653 SS Gr50/1	Purlin
355	M356	N159	N182		Purlin	Beam	CS	A653 SS Gr50/1	Purlin
356	M357	N162	N229		Purlin	Beam	CS	A653 SS Gr50/1	Purlin
357	M358	N164	N230		Purlin	Beam	CS	A653 SS Gr50/1	Purlin
358	M359	N168	N234	180	Purlin	Beam	CS	A653 SS Gr50/1	Purlin
359	M360	N174	N239	180	Purlin	Beam	CS	A653 SS Gr50/1	Purlin
360	M362	N237	N251	180	Purlin	Beam	CS	A653 SS Gr50/1	Purlin
361	M363	N39	N43		Ridge Purlin	Beam	CS B-to-B	A653 SS Gr50/1	Ridge Purlin
362	M364	N207	N249	180	Purlin	Beam	CS	A653 SS Gr50/1	Purlin
363	M365	N182	N250		Purlin	Beam	CS	A653 SS Gr50/1	Purlin
364	M366	N193	N258		Purlin	Beam	CS	A653 SS Gr50/1	Purlin
365	M367	N239	N261	180	Purlin	Beam	CS	A653 SS Gr50/1	Purlin
366	M368	N232	N300	180	Purlin	Beam	CS	A653 SS Gr50/1	Purlin
367	M369	N227	N247		Purlin	Beam	CS	A653 SS Gr50/1	Purlin
368	M370	N225	N294		Purlin	Beam	CS	A653 SS Gr50/1	Purlin
369	M371	N190	N271	180	Purlin	Beam	CS	A653 SS Gr50/1	Purlin
370	M372	N224	N293		Purlin	Beam	CS	A653 SS Gr50/1	Purlin
371	M373	N179	N263		Purlin	Beam	CS	A653 SS Gr50/1	Purlin
372	M374	N229	N297		Purlin	Beam	CS	A653 SS Gr50/1	Purlin
373	M375	N230	N298		Purlin	Beam	CS	A653 SS Gr50/1	Purlin
374	M376	N234	N302	180	Purlin	Beam	CS	A653 SS Gr50/1	Purlin
375	M379	N297	N365		Purlin	Beam	CS	A653 SS Gr50/1	Purlin
376	M380	N43	N44		Ridge Purlin	Beam	CS B-to-B	A653 SS Gr50/1	Ridge Purlin
377	M381	N247	N331		Purlin	Beam	CS	A653 SS Gr50/1	Purlin
378	M382	N298	N366		Purlin	Beam	CS	A653 SS Gr50/1	Purlin
379	M383	N261	N326	180	Purlin	Beam	CS	A653 SS Gr50/1	Purlin
380	M384	N302	N368	180	Purlin	Beam	CS	A653 SS Gr50/1	Purlin
381	M385	N251	N333	180	Purlin	Beam	CS	A653 SS Gr50/1	Purlin
382	M386	N249	N322	180	Purlin	Beam	CS	A653 SS Gr50/1	Purlin
383	M387	N250	N341		Purlin	Beam	CS	A653 SS Gr50/1	Purlin
384	M388	N258	N318		Purlin	Beam	CS	A653 SS Gr50/1	Purlin
385	M389	N300	N315	180	Purlin	Beam	CS	A653 SS Gr50/1	Purlin
386	M390	N294	N364		Purlin	Beam	CS	A653 SS Gr50/1	Purlin
387	M391	N271	N328	180	Purlin	Beam	CS	A653 SS Gr50/1	Purlin
388	M392	N293	N363		Purlin	Beam	CS	A653 SS Gr50/1	Purlin
389	M393	N263	N308		Purlin	Beam	CS	A653 SS Gr50/1	Purlin
390	M394	N333	N376	180	Purlin	Beam	CS	A653 SS Gr50/1	Purlin
391	M395	N326	N410	180	Purlin	Beam	CS	A653 SS Gr50/1	Purlin
392	M396	N322	N408	180	Purlin	Beam	CS	A653 SS Gr50/1	Purlin
393	M397	N365	N386		Purlin	Beam	CS	A653 SS Gr50/1	Purlin
394	M398	N318	N405		Purlin	Beam	CS	A653 SS Gr50/1	Purlin
395	M400	N44	N45		Ridge Purlin	Beam	CS B-to-B	A653 SS Gr50/1	Ridge Purlin
396	M401	N331	N411		Purlin	Beam	CS	A653 SS Gr50/1	Purlin
397	M402	N366	N433		Purlin	Beam	CS	A653 SS Gr50/1	Purlin
398	M403	N368	N399	180	Purlin	Beam	CS	A653 SS Gr50/1	Purlin
399	M404	N341	N415		Purlin	Beam	CS	A653 SS Gr50/1	Purlin
400	M405	N315	N373	180	Purlin	Beam	CS	A653 SS Gr50/1	Purlin
401	M406	N364	N387		Purlin	Beam	CS	A653 SS Gr50/1	Purlin
402	M407	N328	N394	180	Purlin	Beam	CS	A653 SS Gr50/1	Purlin
403	M408	N363	N432		Purlin	Beam	CS	A653 SS Gr50/1	Purlin
404	M409	N308	N401		Purlin	Beam	CS	A653 SS Gr50/1	Purlin
405	M410	N411	N468		Purlin	Beam	CS	A653 SS Gr50/1	Purlin
406	M411	N387	N482		Purlin	Beam	CS	A653 SS Gr50/1	Purlin

**Member Primary Data (Continued)**

	Label	I Node	J Node	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rule
407	M412	N394	N457	180	Purlin	Beam	CS	A653 SS Gr50/1	Purlin
408	M413	N376	N456	180	Purlin	Beam	CS	A653 SS Gr50/1	Purlin
409	M414	N386	N481		Purlin	Beam	CS	A653 SS Gr50/1	Purlin
410	M415	N401	N459		Purlin	Beam	CS	A653 SS Gr50/1	Purlin
411	M416	N410	N442	180	Purlin	Beam	CS	A653 SS Gr50/1	Purlin
412	M417	N408	N438	180	Purlin	Beam	CS	A653 SS Gr50/1	Purlin
413	M418	N405	N439		Purlin	Beam	CS	A653 SS Gr50/1	Purlin
414	M420	N45	N41		Ridge Purlin	Beam	CS B-to-B	A653 SS Gr50/1	Ridge Purlin
415	M421	N433	N500		Purlin	Beam	CS	A653 SS Gr50/1	Purlin
416	M422	N399	N485	180	Purlin	Beam	CS	A653 SS Gr50/1	Purlin
417	M423	N415	N444		Purlin	Beam	CS	A653 SS Gr50/1	Purlin
418	M424	N373	N458	180	Purlin	Beam	CS	A653 SS Gr50/1	Purlin
419	M425	N432	N499		Purlin	Beam	CS	A653 SS Gr50/1	Purlin
420	M427	N439	N543		Purlin	Beam	CS	A653 SS Gr50/1	Purlin
421	M428	N41	N46		Ridge Purlin	Beam	CS B-to-B	A653 SS Gr50/1	Ridge Purlin
422	M429	N500	N565		Purlin	Beam	CS	A653 SS Gr50/1	Purlin
423	M430	N482	N524		Purlin	Beam	CS	A653 SS Gr50/1	Purlin
424	M431	N481	N561		Purlin	Beam	CS	A653 SS Gr50/1	Purlin
425	M432	N459	N521		Purlin	Beam	CS	A653 SS Gr50/1	Purlin
426	M433	N442	N522	180	Purlin	Beam	CS	A653 SS Gr50/1	Purlin
427	M434	N468	N554		Purlin	Beam	CS	A653 SS Gr50/1	Purlin
428	M435	N457	N529	180	Purlin	Beam	CS	A653 SS Gr50/1	Purlin
429	M436	N456	N549	180	Purlin	Beam	CS	A653 SS Gr50/1	Purlin
430	M437	N438	N509	180	Purlin	Beam	CS	A653 SS Gr50/1	Purlin
431	M438	N485	N532	180	Purlin	Beam	CS	A653 SS Gr50/1	Purlin
432	M439	N444	N540		Purlin	Beam	CS	A653 SS Gr50/1	Purlin
433	M440	N458	N550	180	Purlin	Beam	CS	A653 SS Gr50/1	Purlin
434	M441	N499	N564		Purlin	Beam	CS	A653 SS Gr50/1	Purlin
435	M442	N554	N610		Purlin	Beam	CS	A653 SS Gr50/1	Purlin
436	M443	N561	N611		Purlin	Beam	CS	A653 SS Gr50/1	Purlin
437	M444	N565	N612		Purlin	Beam	CS	A653 SS Gr50/1	Purlin
438	M445	N46	N47		Ridge Purlin	Beam	CS B-to-B	A653 SS Gr50/1	Ridge Purlin
439	M446	N550	N594	180	Purlin	Beam	CS	A653 SS Gr50/1	Purlin
440	M447	N532	N590	180	Purlin	Beam	CS	A653 SS Gr50/1	Purlin
441	M448	N509	N580	180	Purlin	Beam	CS	A653 SS Gr50/1	Purlin
442	M449	N549	N576	180	Purlin	Beam	CS	A653 SS Gr50/1	Purlin
443	M450	N529	N582	180	Purlin	Beam	CS	A653 SS Gr50/1	Purlin
444	M452	N518	N585	180	Purlin	Beam	CS	A653 SS Gr50/1	Purlin
445	M453	N37	N31	90	Load Track	Beam	CU	A653 SS Gr33	Load Track
446	M454	N37	N540	90	Dbl Stud	Column	CS B-to-B	A653 SS Gr33	Dbl Stud
447	M451	N112	N176		Purlin	Beam	CS	A653 SS Gr50/1	Purlin
448	M455	N176	N241		Purlin	Beam	CS	A653 SS Gr50/1	Purlin
449	M456	N241	N306		Purlin	Beam	CS	A653 SS Gr50/1	Purlin
450	M457	N306	N334		Purlin	Beam	CS	A653 SS Gr50/1	Purlin
451	M458	N334	N384		Purlin	Beam	CS	A653 SS Gr50/1	Purlin
452	M459	N384	N480		Purlin	Beam	CS	A653 SS Gr50/1	Purlin
453	M460	N480	N518		Purlin	Beam	CS	A653 SS Gr50/1	Purlin
454	M462	N522	N569		Purlin	Beam	CS	A653 SS Gr50/1	Purlin

**Cold Formed Steel Design Parameters**

	Label	Shape	Length [ft]	Lb y-y [ft]	Lb z-z [ft]	Lcomp top [ft]	Lcomp bot [ft]	K y-y	K z-z	R	a [ft]	Function
1	M1	Top Track	36.111			Lbyy						Lateral
2	M2	Top Track	32.125			Lbyy						Lateral
3	M3	Stud	0.157			Lbyy						Lateral
4	M4	Stud	0.472			Lbyy						Lateral

**Cold Formed Steel Design Parameters (Continued)**

	Label	Shape	Length [ft]	Lb y-y [ft]	Lb z-z [ft]	Lcomp top [ft]	Lcomp bot [ft]	K y-y	K z-z	R	a [ft]	Function
5	M5	Stud	0.786			Lbyy						Lateral
6	M6	Stud	1.101			Lbyy						Lateral
7	M7	Stud	1.415			Lbyy						Lateral
8	M8	Stud	1.729			Lbyy						Lateral
9	M9	Stud	2.044			Lbyy						Lateral
10	M10	Stud	2.358			Lbyy						Lateral
11	M11	Stud	2.673			Lbyy						Lateral
12	M12	Stud	2.653			Lbyy						Lateral
13	M13	Stud	2.299			Lbyy						Lateral
14	M14	Stud	1.946			Lbyy						Lateral
15	M15	Stud	1.592			Lbyy						Lateral
16	M16	Stud	1.238			Lbyy						Lateral
17	M17	Stud	0.884			Lbyy						Lateral
18	M18	Stud	0.531			Lbyy						Lateral
19	M19	Stud	0.177			Lbyy						Lateral
20	M20	Dbl Stud	0.314			Lbyy						Lateral
21	M21	Dbl Stud	0.629			Lbyy						Lateral
22	M22	Dbl Stud	0.943			Lbyy						Lateral
23	M23	Dbl Stud	1.258			Lbyy						Lateral
24	M24	Dbl Stud	1.572			Lbyy						Lateral
25	M25	Dbl Stud	1.887			Lbyy						Lateral
26	M26	Dbl Stud	2.201			Lbyy						Lateral
27	M27	Dbl Stud	2.516			Lbyy						Lateral
28	M28	Dbl Stud	2.83			Lbyy						Lateral
29	M29	Dbl Stud	2.476			Lbyy						Lateral
30	M30	Dbl Stud	2.122			Lbyy						Lateral
31	M31	Dbl Stud	1.769			Lbyy						Lateral
32	M32	Dbl Stud	1.415			Lbyy						Lateral
33	M33	Dbl Stud	1.061			Lbyy						Lateral
34	M34	Dbl Stud	0.707			Lbyy						Lateral
35	M35	Dbl Stud	0.354			Lbyy						Lateral
36	M36	Load Track	68			Lbyy						Lateral
37	M37	Stud	2.358			Lbyy						Lateral
38	M38	Stud	0.472			Lbyy						Lateral
39	M39	Dbl Stud	1.887			Lbyy						Lateral
40	M40	Stud	1.238			Lbyy						Lateral
41	M41	Dbl Stud	0.314			Lbyy						Lateral
42	M42	Top Track	32.125			Lbyy						Lateral
43	M43	Stud	1.415			Lbyy						Lateral
44	M44	Stud	0.177			Lbyy						Lateral
45	M45	Top Track	36.111			Lbyy						Lateral
46	M46	Stud	1.101			Lbyy						Lateral
47	M47	Dbl Stud	1.258			Lbyy						Lateral
48	M48	Dbl Stud	2.201			Lbyy						Lateral
49	M49	Stud	2.044			Lbyy						Lateral
50	M50	Stud	1.592			Lbyy						Lateral
51	M51	Stud	2.299			Lbyy						Lateral
52	M52	Dbl Stud	2.516			Lbyy						Lateral
53	M53	Dbl Stud	1.061			Lbyy						Lateral
54	M54	Dbl Stud	2.122			Lbyy						Lateral
55	M55	Dbl Stud	2.476			Lbyy						Lateral
56	M56	Stud	2.653			Lbyy						Lateral
57	M57	Stud	1.946			Lbyy						Lateral
58	M58	Dbl Stud	1.769			Lbyy						Lateral
59	M59	Dbl Stud	1.415			Lbyy						Lateral

**Cold Formed Steel Design Parameters (Continued)**

	Label	Shape	Length [ft]	Lb y-y [ft]	Lb z-z [ft]	Lcomp top [ft]	Lcomp bot [ft]	K y-y	K z-z	R	a [ft]	Function
60	M60	Stud	0.884			Lbyy						Lateral
61	M61	Dbl Stud	0.707			Lbyy						Lateral
62	M62	Stud	0.531			Lbyy						Lateral
63	M63	Dbl Stud	0.354			Lbyy						Lateral
64	M64	Stud	1.729			Lbyy						Lateral
65	M65	Stud	2.673			Lbyy						Lateral
66	M66	Dbl Stud	2.83			Lbyy						Lateral
67	M67	Stud	0.157			Lbyy						Lateral
68	M68	Dbl Stud	0.629			Lbyy						Lateral
69	M69	Stud	0.786			Lbyy						Lateral
70	M70	Dbl Stud	0.943			Lbyy						Lateral
71	M71	Dbl Stud	1.572			Lbyy						Lateral
72	M72	Load Track	68			Lbyy						Lateral
73	M73	Stud	2.358			Lbyy						Lateral
74	M74	Stud	1.101			Lbyy						Lateral
75	M75	Stud	0.531			Lbyy						Lateral
76	M76	Stud	1.415			Lbyy						Lateral
77	M77	Stud	0.884			Lbyy						Lateral
78	M78	Dbl Stud	0.314			Lbyy						Lateral
79	M79	Stud	1.592			Lbyy						Lateral
80	M80	Stud	0.177			Lbyy						Lateral
81	M81	Dbl Stud	1.415			Lbyy						Lateral
82	M82	Dbl Stud	2.476			Lbyy						Lateral
83	M83	Stud	0.472			Lbyy						Lateral
84	M84	Stud	2.299			Lbyy						Lateral
85	M85	Dbl Stud	1.887			Lbyy						Lateral
86	M86	Stud	1.238			Lbyy						Lateral
87	M87	Stud	1.729			Lbyy						Lateral
88	M88	Top Track	36.111			Lbyy						Lateral
89	M89	Top Track	32.125			Lbyy						Lateral
90	M90	Dbl Stud	1.258			Lbyy						Lateral
91	M91	Dbl Stud	2.201			Lbyy						Lateral
92	M92	Stud	2.044			Lbyy						Lateral
93	M93	Dbl Stud	2.516			Lbyy						Lateral
94	M94	Dbl Stud	1.061			Lbyy						Lateral
95	M95	Dbl Stud	2.122			Lbyy						Lateral
96	M96	Stud	2.653			Lbyy						Lateral
97	M97	Stud	1.946			Lbyy						Lateral
98	M98	Dbl Stud	1.769			Lbyy						Lateral
99	M99	Dbl Stud	0.707			Lbyy						Lateral
100	M100	Dbl Stud	0.354			Lbyy						Lateral
101	M101	Stud	2.673			Lbyy						Lateral
102	M102	Dbl Stud	2.83			Lbyy						Lateral
103	M103	Stud	0.157			Lbyy						Lateral
104	M104	Dbl Stud	0.629			Lbyy						Lateral
105	M105	Stud	0.786			Lbyy						Lateral
106	M106	Dbl Stud	0.943			Lbyy						Lateral
107	M107	Dbl Stud	1.572			Lbyy						Lateral
108	M108	Load Track	68			Lbyy						Lateral
109	M109	Stud	2.299			Lbyy						Lateral
110	M110	Dbl Stud	1.061			Lbyy						Lateral
111	M111	Stud	0.884			Lbyy						Lateral
112	M112	Dbl Stud	2.476			Lbyy						Lateral
113	M113	Dbl Stud	1.258			Lbyy						Lateral
114	M114	Stud	2.358			Lbyy						Lateral

**Cold Formed Steel Design Parameters (Continued)**

	Label	Shape	Length [ft]	Lb y-y [ft]	Lb z-z [ft]	Lcomp top [ft]	Lcomp bot [ft]	K y-y	K z-z	R	a [ft]	Function
115	M115	Stud	1.101			Lbyy						Lateral
116	M116	Stud	0.531			Lbyy						Lateral
117	M117	Stud	1.592			Lbyy						Lateral
118	M118	Stud	1.415			Lbyy						Lateral
119	M119	Dbl Stud	0.314			Lbyy						Lateral
120	M120	Stud	0.177			Lbyy						Lateral
121	M121	Dbl Stud	1.415			Lbyy						Lateral
122	M122	Stud	0.472			Lbyy						Lateral
123	M123	Dbl Stud	1.887			Lbyy						Lateral
124	M124	Stud	1.238			Lbyy						Lateral
125	M125	Stud	1.946			Lbyy						Lateral
126	M126	Stud	2.653			Lbyy						Lateral
127	M127	Stud	1.729			Lbyy						Lateral
128	M128	Top Track	36.111			Lbyy						Lateral
129	M129	Top Track	32.125			Lbyy						Lateral
130	M130	Dbl Stud	2.201			Lbyy						Lateral
131	M131	Stud	2.044			Lbyy						Lateral
132	M132	Dbl Stud	2.516			Lbyy						Lateral
133	M133	Dbl Stud	2.122			Lbyy						Lateral
134	M134	Dbl Stud	1.769			Lbyy						Lateral
135	M135	Dbl Stud	0.707			Lbyy						Lateral
136	M136	Dbl Stud	0.354			Lbyy						Lateral
137	M137	Stud	2.673			Lbyy						Lateral
138	M138	Dbl Stud	2.83			Lbyy						Lateral
139	M139	Stud	0.157			Lbyy						Lateral
140	M140	Dbl Stud	0.629			Lbyy						Lateral
141	M141	Stud	0.786			Lbyy						Lateral
142	M142	Dbl Stud	0.943			Lbyy						Lateral
143	M143	Dbl Stud	1.572			Lbyy						Lateral
144	M144	Load Track	68			Lbyy						Lateral
145	M145	Dbl Stud	1.572			Lbyy						Lateral
146	M146	Dbl Stud	1.769			Lbyy						Lateral
147	M147	Stud	1.592			Lbyy						Lateral
148	M148	Dbl Stud	0.314			Lbyy						Lateral
149	M149	Dbl Stud	0.354			Lbyy						Lateral
150	M150	Stud	2.299			Lbyy						Lateral
151	M151	Dbl Stud	1.061			Lbyy						Lateral
152	M152	Stud	0.884			Lbyy						Lateral
153	M153	Dbl Stud	2.476			Lbyy						Lateral
154	M154	Dbl Stud	1.258			Lbyy						Lateral
155	M155	Load Track	68			Lbyy						Lateral
156	M156	Stud	2.358			Lbyy						Lateral
157	M157	Stud	1.101			Lbyy						Lateral
158	M158	Stud	0.531			Lbyy						Lateral
159	M159	Stud	1.415			Lbyy						Lateral
160	M160	Dbl Stud	2.122			Lbyy						Lateral
161	M161	Stud	0.177			Lbyy						Lateral
162	M162	Dbl Stud	1.415			Lbyy						Lateral
163	M163	Stud	0.472			Lbyy						Lateral
164	M164	Dbl Stud	1.887			Lbyy						Lateral
165	M165	Stud	1.238			Lbyy						Lateral
166	M166	Stud	1.946			Lbyy						Lateral
167	M167	Stud	2.653			Lbyy						Lateral
168	M168	Stud	1.729			Lbyy						Lateral
169	M169	Top Track	36.111			Lbyy						Lateral

**Cold Formed Steel Design Parameters (Continued)**

	Label	Shape	Length [ft]	Lb y-y [ft]	Lb z-z [ft]	Lcomp top [ft]	Lcomp bot [ft]	K y-y	K z-z	R	a [ft]	Function
170	M170	Top Track	32.125			Lbyy						Lateral
171	M171	Dbl Stud	2.201			Lbyy						Lateral
172	M172	Stud	2.044			Lbyy						Lateral
173	M173	Dbl Stud	2.516			Lbyy						Lateral
174	M174	Dbl Stud	0.707			Lbyy						Lateral
175	M175	Stud	2.673			Lbyy						Lateral
176	M176	Dbl Stud	2.83			Lbyy						Lateral
177	M177	Stud	0.157			Lbyy						Lateral
178	M178	Dbl Stud	0.629			Lbyy						Lateral
179	M179	Stud	0.786			Lbyy						Lateral
180	M180	Dbl Stud	0.943			Lbyy						Lateral
181	M181	Stud	2.673			Lbyy						Lateral
182	M182	Top Track	36.111			Lbyy						Lateral
183	M183	Stud	2.653			Lbyy						Lateral
184	M184	Dbl Stud	1.572			Lbyy						Lateral
185	M185	Stud	0.157			Lbyy						Lateral
186	M186	Stud	1.592			Lbyy						Lateral
187	M187	Stud	2.358			Lbyy						Lateral
188	M188	Dbl Stud	1.769			Lbyy						Lateral
189	M189	Dbl Stud	0.314			Lbyy						Lateral
190	M190	Dbl Stud	0.354			Lbyy						Lateral
191	M191	Stud	2.299			Lbyy						Lateral
192	M192	Dbl Stud	1.061			Lbyy						Lateral
193	M193	Stud	0.884			Lbyy						Lateral
194	M194	Dbl Stud	2.476			Lbyy						Lateral
195	M195	Dbl Stud	1.258			Lbyy						Lateral
196	M196	Stud	0.531			Lbyy						Lateral
197	M197	Load Track	68			Lbyy						Lateral
198	M198	Stud	1.101			Lbyy						Lateral
199	M199	Stud	1.415			Lbyy						Lateral
200	M200	Dbl Stud	2.122			Lbyy						Lateral
201	M201	Stud	0.177			Lbyy						Lateral
202	M202	Dbl Stud	1.415			Lbyy						Lateral
203	M203	Stud	0.472			Lbyy						Lateral
204	M204	Dbl Stud	1.887			Lbyy						Lateral
205	M205	Stud	1.238			Lbyy						Lateral
206	M206	Stud	1.946			Lbyy						Lateral
207	M207	Stud	1.729			Lbyy						Lateral
208	M208	Top Track	32.125			Lbyy						Lateral
209	M209	Dbl Stud	2.201			Lbyy						Lateral
210	M210	Stud	2.044			Lbyy						Lateral
211	M211	Dbl Stud	2.516			Lbyy						Lateral
212	M212	Dbl Stud	0.707			Lbyy						Lateral
213	M213	Dbl Stud	2.83			Lbyy						Lateral
214	M214	Dbl Stud	0.629			Lbyy						Lateral
215	M215	Stud	0.786			Lbyy						Lateral
216	M216	Dbl Stud	0.943			Lbyy						Lateral
217	M217	Stud	2.044			Lbyy						Lateral
218	M218	Dbl Stud	2.122			Lbyy						Lateral
219	M219	Dbl Stud	0.707			Lbyy						Lateral
220	M220	Dbl Stud	0.314			Lbyy						Lateral
221	M221	Stud	0.531			Lbyy						Lateral
222	M222	Dbl Stud	1.572			Lbyy						Lateral
223	M223	Dbl Stud	0.629			Lbyy						Lateral
224	M224	Dbl Stud	1.415			Lbyy						Lateral

**Cold Formed Steel Design Parameters (Continued)**

	Label	Shape	Length [ft]	Lb y-y [ft]	Lb z-z [ft]	Lcomp top [ft]	Lcomp bot [ft]	K y-y	K z-z	R	a [ft]	Function
225	M225	Dbl Stud	2.201			Lbyy						Lateral
226	M226	Dbl Stud	1.887			Lbyy						Lateral
227	M227	Dbl Stud	0.354			Lbyy						Lateral
228	M228	Stud	0.157			Lbyy						Lateral
229	M229	Dbl Stud	2.476			Lbyy						Lateral
230	M230	Stud	2.673			Lbyy						Lateral
231	M231	Top Track	36.111			Lbyy						Lateral
232	M232	Stud	2.653			Lbyy						Lateral
233	M233	Stud	1.592			Lbyy						Lateral
234	M234	Stud	2.358			Lbyy						Lateral
235	M235	Dbl Stud	1.769			Lbyy						Lateral
236	M236	Stud	2.299			Lbyy						Lateral
237	M237	Dbl Stud	1.061			Lbyy						Lateral
238	M238	Stud	0.884			Lbyy						Lateral
239	M239	Dbl Stud	1.258			Lbyy						Lateral
240	M240	Load Track	68			Lbyy						Lateral
241	M241	Stud	1.101			Lbyy						Lateral
242	M242	Stud	1.415			Lbyy						Lateral
243	M243	Stud	0.177			Lbyy						Lateral
244	M244	Stud	0.472			Lbyy						Lateral
245	M245	Stud	1.238			Lbyy						Lateral
246	M246	Stud	1.946			Lbyy						Lateral
247	M247	Stud	1.729			Lbyy						Lateral
248	M248	Top Track	32.125			Lbyy						Lateral
249	M249	Dbl Stud	2.516			Lbyy						Lateral
250	M250	Dbl Stud	2.83			Lbyy						Lateral
251	M251	Stud	0.786			Lbyy						Lateral
252	M252	Dbl Stud	0.943			Lbyy						Lateral
253	M253	Stud	2.673			Lbyy						Lateral
254	M254	Dbl Stud	0.314			Lbyy						Lateral
255	M255	Top Track	32.125			Lbyy						Lateral
256	M256	Dbl Stud	2.516			Lbyy						Lateral
257	M257	Stud	0.531			Lbyy						Lateral
258	M258	Dbl Stud	0.354			Lbyy						Lateral
259	M259	Dbl Stud	2.83			Lbyy						Lateral
260	M260	Stud	0.157			Lbyy						Lateral
261	M261	Stud	1.415			Lbyy						Lateral
262	M262	Stud	2.044			Lbyy						Lateral
263	M263	Dbl Stud	2.122			Lbyy						Lateral
264	M264	Dbl Stud	0.707			Lbyy						Lateral
265	M265	Dbl Stud	0.629			Lbyy						Lateral
266	M266	Dbl Stud	1.415			Lbyy						Lateral
267	M267	Dbl Stud	2.201			Lbyy						Lateral
268	M268	Dbl Stud	1.887			Lbyy						Lateral
269	M269	Dbl Stud	2.476			Lbyy						Lateral
270	M270	Top Track	36.111			Lbyy						Lateral
271	M271	Stud	2.653			Lbyy						Lateral
272	M272	Stud	1.592			Lbyy						Lateral
273	M273	Stud	1.101			Lbyy						Lateral
274	M274	Stud	2.358			Lbyy						Lateral
275	M275	Dbl Stud	1.769			Lbyy						Lateral
276	M276	Stud	2.299			Lbyy						Lateral
277	M277	Dbl Stud	1.061			Lbyy						Lateral
278	M278	Stud	0.884			Lbyy						Lateral
279	M279	Dbl Stud	1.258			Lbyy						Lateral



**Cold Formed Steel Design Parameters (Continued)**

	Label	Shape	Length [ft]	Lb y-y [ft]	Lb z-z [ft]	Lcomp top [ft]	Lcomp bot [ft]	K y-y	K z-z	R	a [ft]	Function
280	M280	Load Track	20			Lbyy						Lateral
281	M281	Stud	0.177			Lbyy						Lateral
282	M282	Stud	0.472			Lbyy						Lateral
283	M283	Stud	1.238			Lbyy						Lateral
284	M284	Stud	1.946			Lbyy						Lateral
285	M285	Stud	1.729			Lbyy						Lateral
286	M286	Stud	0.786			Lbyy						Lateral
287	M287	Dbl Stud	0.943			Lbyy						Lateral
288	M288	Dbl Stud	2.83			Lbyy						Lateral
289	M289	Dbl Stud	1.415			Lbyy						Lateral
290	M290	Stud	2.299			Lbyy						Lateral
291	M291	Stud	1.592			Lbyy						Lateral
292	M292	Dbl Stud	1.769			Lbyy						Lateral
293	M293	Stud	1.238			Lbyy						Lateral
294	M294	Top Track	32.125			Lbyy						Lateral
295	M295	Stud	0.531			Lbyy						Lateral
296	M296	Dbl Stud	0.354			Lbyy						Lateral
297	M297	Dbl Stud	2.122			Lbyy						Lateral
298	M298	Dbl Stud	0.707			Lbyy						Lateral
299	M299	Dbl Stud	2.476			Lbyy						Lateral
300	M300	Stud	2.653			Lbyy						Lateral
301	M301	Dbl Stud	1.061			Lbyy						Lateral
302	M302	Stud	0.884			Lbyy						Lateral
303	M303	Stud	0.177			Lbyy						Lateral
304	M304	Stud	1.946			Lbyy						Lateral
305	M305	Top Track	16.049			Lbyy						Lateral
306	M306	Stud	1.729			Lbyy						Lateral
307	M307	Stud	2.044			Lbyy						Lateral
308	M308	Stud	2.358			Lbyy						Lateral
309	M309	Stud	2.673			Lbyy						Lateral
310	M310	Dbl Stud	1.887			Lbyy						Lateral
311	M311	Dbl Stud	2.201			Lbyy						Lateral
312	M312	Dbl Stud	2.516			Lbyy						Lateral
313	M313	Load Track	48			Lbyy						Lateral
314	M314	Load Track	30			Lbyy						Lateral
315	M315	Load Track	30			Lbyy						Lateral
316	M316	Load Track	30			Lbyy						Lateral
317	M317	Load Track	30			Lbyy						Lateral
318	M318	Load Track	30			Lbyy						Lateral
319	M319	Load Track	30			Lbyy						Lateral
320	M320	Load Track	30			Lbyy						Lateral
321	M321	Load Track	30			Lbyy						Lateral
322	M322	Load Track	30			Lbyy						Lateral
323	M323	Load Track	30			Lbyy						Lateral
324	M324	Load Track	30			Lbyy						Lateral
325	M325	Load Track	30			Lbyy						Lateral
326	M326	Load Track	30			Lbyy						Lateral
327	M327	Load Track	30			Lbyy						Lateral
328	M328	Load Track	30			Lbyy						Lateral
329	M329	Load Track	30			Lbyy						Lateral
330	M330	Purlin	30	1	10	Lbyy	10	1	1	0.4		Lateral
331	M331	Purlin	30	1	10	Lbyy	10	1	1	0.4		Lateral
332	M332	Purlin	30	1	10	Lbyy	10	1	1	0.4		Lateral
333	M333	Purlin	30	1	10	Lbyy	10	1	1	0.4		Lateral
334	M334	Purlin	30	1	10	Lbyy	10	1	1	0.4		Lateral

**Cold Formed Steel Design Parameters (Continued)**

	Label	Shape	Length [ft]	Lb y-y [ft]	Lb z-z [ft]	Lcomp top [ft]	Lcomp bot [ft]	K y-y	K z-z	R	a [ft]	Function
335	M335	Purlin	30	1	10	Lbyy	10	1	1	0.4		Lateral
336	M336	Purlin	30	1	10	Lbyy	10	1	1	0.4		Lateral
337	M337	Purlin	30	1	10	Lbyy	10	1	1	0.4		Lateral
338	M338	Ridge Purlin	30	1	10	Lbyy	10	1	1	0.4	1	Lateral
339	M339	Purlin	30	1	10	Lbyy	10	1	1	0.4		Lateral
340	M340	Purlin	30	1	10	Lbyy	10	1	1	0.4		Lateral
341	M341	Purlin	30	1	10	Lbyy	10	1	1	0.4		Lateral
342	M342	Purlin	30	1	10	Lbyy	10	1	1	0.4		Lateral
343	M343	Purlin	30	1	10	Lbyy	10	1	1	0.4		Lateral
344	M344	Purlin	30	1	10	Lbyy	10	1	1	0.4		Lateral
345	M346	Purlin	30	1	10	Lbyy	10	1	1	0.4		Lateral
346	M347	Purlin	30	1	10	Lbyy	10	1	1	0.4		Lateral
347	M348	Purlin	30	1	10	Lbyy	10	1	1	0.4		Lateral
348	M349	Purlin	30	1	10	Lbyy	10	1	1	0.4		Lateral
349	M350	Purlin	30	1	10	Lbyy	10	1	1	0.4		Lateral
350	M351	Purlin	30	1	10	Lbyy	10	1	1	0.4		Lateral
351	M352	Ridge Purlin	30	1	10	Lbyy	10	1	1	0.4	1	Lateral
352	M353	Purlin	30	1	10	Lbyy	10	1	1	0.4		Lateral
353	M354	Purlin	30	1	10	Lbyy	10	1	1	0.4		Lateral
354	M355	Purlin	30	1	10	Lbyy	10	1	1	0.4		Lateral
355	M356	Purlin	30	1	10	Lbyy	10	1	1	0.4		Lateral
356	M357	Purlin	30	1	10	Lbyy	10	1	1	0.4		Lateral
357	M358	Purlin	30	1	10	Lbyy	10	1	1	0.4		Lateral
358	M359	Purlin	30	1	10	Lbyy	10	1	1	0.4		Lateral
359	M360	Purlin	30	1	10	Lbyy	10	1	1	0.4		Lateral
360	M362	Purlin	30	1	10	Lbyy	10	1	1	0.4		Lateral
361	M363	Ridge Purlin	30	1	10	Lbyy	10	1	1	0.4	1	Lateral
362	M364	Purlin	30	1	10	Lbyy	10	1	1	0.4		Lateral
363	M365	Purlin	30	1	10	Lbyy	10	1	1	0.4		Lateral
364	M366	Purlin	30	1	10	Lbyy	10	1	1	0.4		Lateral
365	M367	Purlin	30	1	10	Lbyy	10	1	1	0.4		Lateral
366	M368	Purlin	30	1	10	Lbyy	10	1	1	0.4		Lateral
367	M369	Purlin	30	1	10	Lbyy	10	1	1	0.4		Lateral
368	M370	Purlin	30	1	10	Lbyy	10	1	1	0.4		Lateral
369	M371	Purlin	30	1	10	Lbyy	10	1	1	0.4		Lateral
370	M372	Purlin	30	1	10	Lbyy	10	1	1	0.4		Lateral
371	M373	Purlin	30	1	10	Lbyy	10	1	1	0.4		Lateral
372	M374	Purlin	30	1	10	Lbyy	10	1	1	0.4		Lateral
373	M375	Purlin	30	1	10	Lbyy	10	1	1	0.4		Lateral
374	M376	Purlin	30	1	10	Lbyy	10	1	1	0.4		Lateral
375	M379	Purlin	30	1	10	Lbyy	10	1	1	0.4		Lateral
376	M380	Ridge Purlin	30	1	10	Lbyy	10	1	1	0.4	1	Lateral
377	M381	Purlin	30	1	10	Lbyy	10	1	1	0.4		Lateral
378	M382	Purlin	30	1	10	Lbyy	10	1	1	0.4		Lateral
379	M383	Purlin	30	1	10	Lbyy	10	1	1	0.4		Lateral
380	M384	Purlin	30	1	10	Lbyy	10	1	1	0.4		Lateral
381	M385	Purlin	30	1	10	Lbyy	10	1	1	0.4		Lateral
382	M386	Purlin	30	1	10	Lbyy	10	1	1	0.4		Lateral
383	M387	Purlin	30	1	10	Lbyy	10	1	1	0.4		Lateral
384	M388	Purlin	30	1	10	Lbyy	10	1	1	0.4		Lateral
385	M389	Purlin	30	1	10	Lbyy	10	1	1	0.4		Lateral
386	M390	Purlin	30	1	10	Lbyy	10	1	1	0.4		Lateral
387	M391	Purlin	30	1	10	Lbyy	10	1	1	0.4		Lateral
388	M392	Purlin	30	1	10	Lbyy	10	1	1	0.4		Lateral
389	M393	Purlin	30	1	10	Lbyy	10	1	1	0.4		Lateral

**Cold Formed Steel Design Parameters (Continued)**

	Label	Shape	Length [ft]	Lb y-y [ft]	Lb z-z [ft]	Lcomp top [ft]	Lcomp bot [ft]	K y-y	K z-z	R	a [ft]	Function
390	M394	Purlin	30	1	10	Lbyy	10	1	1	0.4		Lateral
391	M395	Purlin	30	1	10	Lbyy	10	1	1	0.4		Lateral
392	M396	Purlin	30	1	10	Lbyy	10	1	1	0.4		Lateral
393	M397	Purlin	30	1	10	Lbyy	10	1	1	0.4		Lateral
394	M398	Purlin	30	1	10	Lbyy	10	1	1	0.4		Lateral
395	M400	Ridge Purlin	30	1	10	Lbyy	10	1	1	0.4	1	Lateral
396	M401	Purlin	30	1	10	Lbyy	10	1	1	0.4		Lateral
397	M402	Purlin	30	1	10	Lbyy	10	1	1	0.4		Lateral
398	M403	Purlin	30	1	10	Lbyy	10	1	1	0.4		Lateral
399	M404	Purlin	30	1	10	Lbyy	10	1	1	0.4		Lateral
400	M405	Purlin	30	1	10	Lbyy	10	1	1	0.4		Lateral
401	M406	Purlin	30	1	10	Lbyy	10	1	1	0.4		Lateral
402	M407	Purlin	30	1	10	Lbyy	10	1	1	0.4		Lateral
403	M408	Purlin	30	1	10	Lbyy	10	1	1	0.4		Lateral
404	M409	Purlin	30	1	10	Lbyy	10	1	1	0.4		Lateral
405	M410	Purlin	30	1	10	Lbyy	10	1	1	0.4		Lateral
406	M411	Purlin	30	1	10	Lbyy	10	1	1	0.4		Lateral
407	M412	Purlin	30	1	10	Lbyy	10	1	1	0.4		Lateral
408	M413	Purlin	30	1	10	Lbyy	10	1	1	0.4		Lateral
409	M414	Purlin	30	1	10	Lbyy	10	1	1	0.4		Lateral
410	M415	Purlin	30	1	10	Lbyy	10	1	1	0.4		Lateral
411	M416	Purlin	30	1	10	Lbyy	10	1	1	0.4		Lateral
412	M417	Purlin	30	1	10	Lbyy	10	1	1	0.4		Lateral
413	M418	Purlin	30	1	10	Lbyy	10	1	1	0.4		Lateral
414	M420	Ridge Purlin	30	1	10	Lbyy	10	1	1	0.4	1	Lateral
415	M421	Purlin	30	1	10	Lbyy	10	1	1	0.4		Lateral
416	M422	Purlin	30	1	10	Lbyy	10	1	1	0.4		Lateral
417	M423	Purlin	30	1	10	Lbyy	10	1	1	0.4		Lateral
418	M424	Purlin	30	1	10	Lbyy	10	1	1	0.4		Lateral
419	M425	Purlin	30	1	10	Lbyy	10	1	1	0.4		Lateral
420	M427	Purlin	30	1	10	Lbyy	10	1	1	0.4		Lateral
421	M428	Ridge Purlin	30	1	10	Lbyy	10	1	1	0.4	1	Lateral
422	M429	Purlin	30	1	10	Lbyy	10	1	1	0.4		Lateral
423	M430	Purlin	30	1	10	Lbyy	10	1	1	0.4		Lateral
424	M431	Purlin	30	1	10	Lbyy	10	1	1	0.4		Lateral
425	M432	Purlin	30	1	10	Lbyy	10	1	1	0.4		Lateral
426	M433	Purlin	30	1	10	Lbyy	10	1	1	0.4		Lateral
427	M434	Purlin	30	1	10	Lbyy	10	1	1	0.4		Lateral
428	M435	Purlin	30	1	10	Lbyy	10	1	1	0.4		Lateral
429	M436	Purlin	30	1	10	Lbyy	10	1	1	0.4		Lateral
430	M437	Purlin	30	1	10	Lbyy	10	1	1	0.4		Lateral
431	M438	Purlin	30	1	10	Lbyy	10	1	1	0.4		Lateral
432	M439	Purlin	30	1	10	Lbyy	10	1	1	0.4		Lateral
433	M440	Purlin	30	1	10	Lbyy	10	1	1	0.4		Lateral
434	M441	Purlin	30	1	10	Lbyy	10	1	1	0.4		Lateral
435	M442	Purlin	30	1	10	Lbyy	10	1	1	0.4		Lateral
436	M443	Purlin	30	1	10	Lbyy	10	1	1	0.4		Lateral
437	M444	Purlin	30	1	10	Lbyy	10	1	1	0.4		Lateral
438	M445	Ridge Purlin	30	1	10	Lbyy	10	1	1	0.4	1	Lateral
439	M446	Purlin	30	1	10	Lbyy	10	1	1	0.4		Lateral
440	M447	Purlin	30	1	10	Lbyy	10	1	1	0.4		Lateral
441	M448	Purlin	30	1	10	Lbyy	10	1	1	0.4		Lateral
442	M449	Purlin	30	1	10	Lbyy	10	1	1	0.4		Lateral
443	M450	Purlin	30	1	10	Lbyy	10	1	1	0.4		Lateral
444	M452	Purlin	30	1	10	Lbyy	10	1	1	0.4		Lateral

**Cold Formed Steel Design Parameters (Continued)**

	Label	Shape	Length [ft]	Lb y-y [ft]	Lb z-z [ft]	Lcomp top [ft]	Lcomp bot [ft]	K y-y	K z-z	R	a [ft]	Function
445	M453	Load Track	48			Lbyy						Lateral
446	M454	Dbl Stud	1.572			Lbyy						Lateral
447	M451	Purlin	30	1	10	Lbyy	10	1	1	0.4		Lateral
448	M455	Purlin	30	1	10	Lbyy	10	1	1	0.4		Lateral
449	M456	Purlin	30	1	10	Lbyy	10	1	1	0.4		Lateral
450	M457	Purlin	30	1	10	Lbyy	10	1	1	0.4		Lateral
451	M458	Purlin	30	1	10	Lbyy	10	1	1	0.4		Lateral
452	M459	Purlin	30	1	10	Lbyy	10	1	1	0.4		Lateral
453	M460	Purlin	30	1	10	Lbyy	10	1	1	0.4		Lateral
454	M462	Purlin	30	1	10	Lbyy	10	1	1	0.4		Lateral

**Design Size and Code Check Parameters**

	Label	Max Depth [in]	Min Depth [in]	Max Width [in]	Min Width [in]	Max Axial/Bending Chk	Max Shear Chk
1	Top Track	6	6	2	2	1	1
2	Load Track	6	6	2	2	1	1
3	Purlin	18	12	8	3	1	1
4	Ridge Purlin	18	12	8	3	1	1
5	Stud	6	6	4	3	1	1
6	Dbl Stud	6	6	8	3	1	1

**Wall Panel U.C. Parameters**

	Label	Max Bending Chk	Max Shear Chk
1	Front	1	1
2	Ends	1	1
3	Back	1	1
4	Interior	1	1
5	Grid 8 Int	1	1
6	Grid B	1	1

**Basic Load Cases**

	BLC Description	Category	Y Gravity	Distributed	Area(Member)	Surface(Plate/Wall)
1	Dead Load	DL	-1			
2	Roof LL	RLL			4	
3	Snow Load	SL			4	
4	Wind X	WL+X			3	3
5	Wind -X	WL-X			3	3
6	Wind Z	WL+Z			3	6
7	Wind -Z	WL-Z			3	6
8	BLC 2 Transient Area Loads	None		147		
9	BLC 3 Transient Area Loads	None		147		
10	BLC 4 Transient Area Loads	None		364		
11	BLC 5 Transient Area Loads	None		364		
12	BLC 6 Transient Area Loads	None		364		
13	BLC 7 Transient Area Loads	None		364		

**Member Area Loads (BLC 2 : Roof LL)**

	Node A	Node B	Node C	Node D	Direction	Load Direction	Magnitude [ksf]
1	N3	N42	N46	N30	Y	A-B	-0.02
2	N42	N4	N31	N46	Y	A-B	-0.02
3	N540	N46	N47	N598	Y	A-B	-0.02

**Member Area Loads (BLC 2 : Roof LL) (Continued)**

	Node A	Node B	Node C	Node D	Direction	Load Direction	Magnitude [ksf]
4	N46	N31	N35	N47	Y	A-B	-0.02

**Member Area Loads (BLC 3 : Snow Load)**

	Node A	Node B	Node C	Node D	Direction	Load Direction	Magnitude [ksf]
1	N3	N42	N46	N30	Y	A-B	-0.02
2	N42	N4	N31	N46	Y	A-B	-0.02
3	N540	N46	N47	N598	Y	A-B	-0.02
4	N46	N31	N35	N47	Y	A-B	-0.02

**Member Area Loads (BLC 4 : Wind X)**

	Node A	Node B	Node C	Node D	Direction	Load Direction	Magnitude [ksf]
1	N3	N42	N46	N30	Perp	A-B	-0.014
2	N42	N4	N35	N47	Perp	A-B	-0.014
3	N540	N46	N47	N598	Perp	A-B	-0.014

**Member Area Loads (BLC 5 : Wind -X)**

	Node A	Node B	Node C	Node D	Direction	Load Direction	Magnitude [ksf]
1	N3	N42	N46	N30	Perp	A-B	-0.014
2	N42	N4	N35	N47	Perp	A-B	-0.014
3	N540	N46	N47	N598	Perp	A-B	-0.014

**Member Area Loads (BLC 6 : Wind Z)**

	Node A	Node B	Node C	Node D	Direction	Load Direction	Magnitude [ksf]
1	N3	N42	N46	N30	Perp	A-B	-0.014
2	N42	N4	N35	N47	Perp	A-B	-0.014
3	N540	N46	N47	N598	Perp	A-B	-0.014

**Member Area Loads (BLC 7 : Wind -Z)**

	Node A	Node B	Node C	Node D	Direction	Load Direction	Magnitude [ksf]
1	N3	N42	N46	N30	Perp	A-B	-0.014
2	N42	N4	N35	N47	Perp	A-B	-0.014
3	N540	N46	N47	N598	Perp	A-B	-0.014

**Load Combinations**

	Description	Solve	P-Delta	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor
1	Deflection 1		Y	DL	1										
2	Deflection 2		Y	LL	1										
3	Deflection 3		Y	DL	1	LL	1								
4	ASCE ASD 1	Yes	Y	DL	1										
5	ASCE ASD 2		Y	DL	1	LL	1	LLS	1						
6	ASCE ASD 3 (a)	Yes	Y	DL	1	RLL	1								
7	ASCE ASD 3 (b)	Yes	Y	DL	1	SL	1	SLN	1						
8	ASCE ASD 4 (a)	Yes	Y	DL	1	LL	0.75	LLS	0.75	RLL	0.75				
9	ASCE ASD 4 (b)	Yes	Y	DL	1	LL	0.75	LLS	0.75	SL	0.75	SLN	0.75		
10	ASCE ASD 5 (a) (a)	Yes	Y	DL	1	WL+X	0.6								
11	ASCE ASD 5 (a) (b)	Yes	Y	DL	1	WL+Z	0.6								
12	ASCE ASD 5 (a) (c)	Yes	Y	DL	1	WL-X	-0.6								

**Load Combinations (Continued)**

	Description	Solve	P-Delta	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor
13	ASCE ASD 5 (a) (d)	Yes	Y	DL	1	WL-Z	-0.6								
14	ASCE ASD 6 (a) (a)	Yes	Y	DL	1	WL+X	0.45	LL	0.75	LLS	0.75	RLL	0.75		
15	ASCE ASD 6 (a) (b)	Yes	Y	DL	1	WL+Z	0.45	LL	0.75	LLS	0.75	RLL	0.75		
16	ASCE ASD 6 (a) (c)	Yes	Y	DL	1	WL-X	-0.45	LL	0.75	LLS	0.75	RLL	0.75		
17	ASCE ASD 6 (a) (d)	Yes	Y	DL	1	WL-Z	-0.45	LL	0.75	LLS	0.75	RLL	0.75		
18	ASCE ASD 6 (b) (a)	Yes	Y	DL	1	WL+X	0.45	LL	0.75	LLS	0.75	SL	0.75	SLN	0.75
19	ASCE ASD 6 (b) (b)	Yes	Y	DL	1	WL+Z	0.45	LL	0.75	LLS	0.75	SL	0.75	SLN	0.75
20	ASCE ASD 6 (b) (c)	Yes	Y	DL	1	WL-X	-0.45	LL	0.75	LLS	0.75	SL	0.75	SLN	0.75
21	ASCE ASD 6 (b) (d)	Yes	Y	DL	1	WL-Z	-0.45	LL	0.75	LLS	0.75	SL	0.75	SLN	0.75
22	ASCE ASD 6 (c) (a)	Yes	Y	DL	1	WL+X	0.45	LL	0.75	LLS	0.75				
23	ASCE ASD 6 (c) (b)	Yes	Y	DL	1	WL+Z	0.45	LL	0.75	LLS	0.75				
24	ASCE ASD 6 (c) (c)	Yes	Y	DL	1	WL-X	-0.45	LL	0.75	LLS	0.75				
25	ASCE ASD 6 (c) (d)	Yes	Y	DL	1	WL-Z	-0.45	LL	0.75	LLS	0.75				
26	ASCE ASD 7 (a)	Yes	Y	DL	0.6	WL+X	0.6								
27	ASCE ASD 7 (b)	Yes	Y	DL	0.6	WL+Z	0.6								
28	ASCE ASD 7 (c)	Yes	Y	DL	0.6	WL-X	-0.6								
29	ASCE ASD 7 (d)	Yes	Y	DL	0.6	WL-Z	-0.6								

**Wall Panel Surface Loads (BLC 4 : Wind X)**

	Wall Panel Label	Direction	Top Magnitude [ksf, F]	Bottom Magnitude [ksf, F]	Start Location [ft]	Height [ft]
1	WP9	z	-0.004	-0.004	0	0
2	WP12	z	-0.007	-0.007	0	0
3	WP13	z	-0.004	-0.004	0	0

**Wall Panel Surface Loads (BLC 5 : Wind -X)**

	Wall Panel Label	Direction	Top Magnitude [ksf, F]	Bottom Magnitude [ksf, F]	Start Location [ft]	Height [ft]
1	WP9	z	0.007	0.007	0	0
2	WP13	z	0.007	0.007	0	0
3	WP12	z	0.004	0.004	0	0

**Wall Panel Surface Loads (BLC 6 : Wind Z)**

	Wall Panel Label	Direction	Top Magnitude [ksf, F]	Bottom Magnitude [ksf, F]	Start Location [ft]	Height [ft]
1	WP1	z	0.004	0.004	0	0
2	WP10	z	0.007	0.007	0	0
3	WP8	z	0.007	0.007	0	0
4	WP9	z	0.009	0.009	0	0
5	WP12	z	0.009	0.009	0	0
6	WP13	z	0.009	0.009	0	0

**Wall Panel Surface Loads (BLC 7 : Wind -Z)**

	Wall Panel Label	Direction	Top Magnitude [ksf, F]	Bottom Magnitude [ksf, F]	Start Location [ft]	Height [ft]
1	WP1	z	-0.004	-0.004	0	0
2	WP10	z	-0.007	-0.007	0	0
3	WP8	z	-0.007	-0.007	0	0
4	WP9	z	0.009	0.009	0	0
5	WP12	z	0.009	0.009	0	0
6	WP13	z	0.009	0.009	0	0

**Envelope AISI S100-16: ASD Member Cold Formed Steel Code Checks**

Member	Shape	Code Check	Loc[ft]	LC	Shear Check	Loc[ft]	Dir	LC	Pn/Om[k]	Tn/Om[k]	Mnyy/Om[k-ft]	Mnzz/Om[k-ft]	Vny/Om[k]	Vnz/Om[k]	Cb	Eqn	
1	M330	1400S350-97	0.846	26.25	21	0.225	26.25	y	21	5.073	67.725	2.719	8.177	6.938	11.409	1	H1.2-1
2	M331	1400S350-97	0.774	12.813	20	0.248	28.125	y	21	5.073	67.725	3.084	8.177	6.938	11.409	1	F3.1-1
3	M332	1400S350-97	0.87	26.25	21	0.21	26.25	y	21	5.073	67.725	2.719	8.177	6.938	11.409	1	H1.2-1
4	M333	1400S350-97	0.749	12.813	21	0.29	27.813	y	21	5.073	67.725	3.084	8.177	6.938	11.409	1	F3.1-1
5	M334	1400S350-97	0.938	15	21	0.201	30	y	21	5.073	67.725	3.026	8.177	6.938	11.409	1	H1.1-2
6	M335	1400S350-97	0.93	15	21	0.201	30	y	21	5.073	67.725	3.026	8.177	6.938	11.409	1	H1.1-2
7	M336	1400S350-97	0.923	15	21	0.201	30	y	20	5.073	67.725	3.084	8.177	6.938	11.409	1	F3.1-1
8	M337	1400S350-97	0.91	15	21	0.201	30	y	20	5.073	67.725	3.084	8.177	6.938	11.409	1	F3.1-1
9	M338	2-1400S350-97-BB	0.493	15.313	21	0.105	27.813	y	21	11.266	135.449	NC	16.354	13.876	-0.625	1	H1.2-1
10	M339	1400S350-97	0.793	26.25	21	0.251	26.25	y	21	5.073	67.725	2.719	8.177	6.938	11.409	1	H1.2-1
11	M340	1400S350-97	0.726	14.688	20	0.282	28.125	y	21	5.073	67.725	2.839	8.177	6.938	11.409	1	F3.1-1
12	M341	1400S350-97	0.737	26.25	21	0.219	26.25	y	21	5.073	67.725	2.719	8.177	6.938	11.409	1	H1.2-1
13	M342	1400S350-97	0.75	14.375	21	0.234	27.813	y	21	5.073	67.725	3.084	8.177	6.938	11.409	1	F3.1-1
14	M343	1400S350-97	0.668	26.25	21	0.181	26.25	y	21	5.073	67.725	2.719	8.177	6.938	11.409	1	H1.2-1
15	M344	1400S350-97	0.736	14.375	21	0.227	0	y	20	5.073	67.725	3.084	8.177	6.938	11.409	1	F3.1-1
16	M346	1400S350-97	0.81	3.75	21	0.267	3.75	y	21	5.073	67.725	3.026	8.177	6.938	11.409	1	H1.2-1
17	M347	1400S350-97	0.844	15	21	0.201	30	y	21	5.073	67.725	3.084	8.177	6.938	11.409	1	F3.1-1
18	M348	1400S350-97	0.698	2.188	21	0.317	2.188	y	21	5.073	67.725	2.719	8.177	6.938	11.409	1	H1.2-1
19	M349	1400S350-97	0.742	3.75	21	0.235	3.75	y	21	5.073	67.725	2.719	8.177	6.938	11.409	1	H1.2-1
20	M350	1400S350-97	0.709	3.75	21	0.208	3.75	y	21	5.073	67.725	2.719	8.177	6.938	11.409	1	H1.2-1
21	M351	1400S350-97	0.67	13.125	21	0.255	1.875	y	21	5.073	67.725	3.084	8.177	6.938	11.409	1	F3.1-1
22	M352	2-1400S350-97-BB	0.348	11.563	21	0.119	27.813	y	21	11.266	135.449	NC	16.354	13.876	-0.625	1	H1.2-1
23	M353	1400S350-97	0.579	15	21	0.256	2.188	y	21	5.073	67.725	2.839	8.177	6.938	11.409	1	F3.1-1
24	M354	1400S350-97	0.893	3.75	21	0.231	3.75	y	21	5.073	67.725	2.719	8.177	6.938	11.409	1	H1.2-1
25	M355	1400S350-97	0.905	3.75	21	0.237	3.75	y	21	5.073	67.725	2.719	8.177	6.938	11.409	1	H1.2-1
26	M356	1400S350-97	0.84	15	21	0.201	30	y	21	5.073	67.725	3.084	8.177	6.938	11.409	1	F3.1-1
27	M357	1400S350-97	0.856	15	21	0.201	30	y	21	5.073	67.725	3.084	8.177	6.938	11.409	1	F3.1-1
28	M358	1400S350-97	0.854	15	21	0.201	30	y	21	5.073	67.725	3.084	8.177	6.938	11.409	1	F3.1-1
29	M359	1400S350-97	0.61	15.313	21	0.289	1.875	y	21	5.073	67.725	2.839	8.177	6.938	11.409	1	F3.1-1
30	M360	1400S350-97	0.577	15	21	0.219	1.875	y	21	5.073	67.725	3.084	8.177	6.938	11.409	1	F3.1-1
31	M362	1400S350-97	0.592	15	21	0.194	2.188	y	21	5.073	67.725	3.084	8.177	6.938	11.409	1	F3.1-1
32	M363	2-1400S350-97-BB	0.58	16.875	20	0.474	16.875	y	20	11.266	135.449	NC	16.354	13.876	-0.625	1	F3.1-1
33	M364	1400S350-97	0.506	15	11	0.176	26.25	y	21	5.073	67.725	3.026	8.177	6.938	11.409	1	H1.2-1
34	M365	1400S350-97	0.835	15	21	0.201	30	y	21	5.073	67.725	3.084	8.177	6.938	11.409	1	F3.1-1
35	M366	1400S350-97	0.677	16.875	20	0.215	28.125	y	21	5.073	67.725	3.084	8.177	6.938	11.409	1	F3.1-1
36	M367	1400S350-97	0.585	15	21	0.165	1.875	y	21	5.073	67.725	3.084	8.177	6.938	11.409	1	F3.1-1
37	M368	1400S350-97	0.532	15	11	0.214	3.438	y	21	5.073	67.725	3.026	8.177	6.938	11.409	1	H1.2-1
38	M369	1400S350-97	0.836	15	21	0.201	30	y	21	5.073	67.725	3.084	8.177	6.938	11.409	1	F3.1-1
39	M370	1400S350-97	0.608	16.563	21	0.275	2.188	y	21	5.073	67.725	3.084	8.177	6.938	11.409	1	F3.1-1
40	M371	1400S350-97	0.494	15	10	0.141	26.25	y	21	5.073	67.725	3.026	8.177	6.938	11.409	1	H1.2-1
41	M372	1400S350-97	0.847	3.75	21	0.198	26.25	y	21	5.073	67.725	2.719	8.177	6.938	11.409	1	H1.2-1
42	M373	1400S350-97	0.698	3.75	21	0.193	3.75	y	20	5.073	67.725	2.719	8.177	6.938	11.409	1	H1.2-1
43	M374	1400S350-97	0.825	15	21	0.201	30	y	20	5.073	67.725	3.084	8.177	6.938	11.409	1	F3.1-1
44	M375	1400S350-97	0.822	15	21	0.201	30	y	20	5.073	67.725	3.084	8.177	6.938	11.409	1	F3.1-1
45	M376	1400S350-97	0.626	15	21	0.245	1.875	y	21	5.073	67.725	2.839	8.177	6.938	11.409	1	F3.1-1
46	M379	1400S350-97	0.815	15	21	0.201	30	y	21	5.073	67.725	3.084	8.177	6.938	11.409	1	F3.1-1
47	M380	2-1400S350-97-BB	0.221	15	21	0.106	2.188	y	21	11.266	135.449	NC	16.354	13.876	-0.625	1	F3.1-1
48	M381	1400S350-97	0.802	15	21	0.201	30	y	21	5.073	67.725	3.084	8.177	6.938	11.409	1	F3.1-1
49	M382	1400S350-97	0.814	15	21	0.201	30	y	21	5.073	67.725	3.084	8.177	6.938	11.409	1	F3.1-1
50	M383	1400S350-97	0.575	15	21	0.161	1.875	y	20	5.073	67.725	3.084	8.177	6.938	11.409	1	F3.1-1
51	M384	1400S350-97	0.594	15	21	0.235	1.875	y	21	5.073	67.725	2.839	8.177	6.938	11.409	1	F3.1-1
52	M385	1400S350-97	0.574	15	21	0.188	2.188	y	21	5.073	67.725	3.084	8.177	6.938	11.409	1	F3.1-1
53	M386	1400S350-97	0.518	15.313	10	0.174	3.75	y	21	5.073	67.725	3.026	8.177	6.938	11.409	1	H1.2-1
54	M387	1400S350-97	0.805	15	21	0.201	30	y	21	5.073	67.725	3.084	8.177	6.938	11.409	1	F3.1-1
55	M388	1400S350-97	0.671	13.125	20	0.214	1.875	y	21	5.073	67.725	3.084	8.177	6.938	11.409	1	F3.1-1

**Envelope AISI S100-16: ASD Member Cold Formed Steel Code Checks (Continued)**

Member	Shape	Code Check	Loc[ft]	LC	Shear Check	Loc[ft]	Dir	LC	Pn/Om[k]	Tn/Om[k]	Mnyy/Om[k-ft]	Mnzz/Om[k-ft]	Vny/Om[k]	Vnz/Om[k]	Cb	Eqn	
56	M389	1400S350-97	0.551	15	10	0.21	3.75	y	21	5.073	67.725	3.026	8.177	6.938	11.409	1	H1.2-1
57	M390	1400S350-97	0.59	13.438	20	0.258	27.813	y	20	5.073	67.725	3.084	8.177	6.938	11.409	1	F3.1-1
58	M391	1400S350-97	0.502	15	10	0.14	3.75	y	21	5.073	67.725	3.026	8.177	6.938	11.409	1	H1.2-1
59	M392	1400S350-97	0.808	26.25	21	0.196	3.75	y	21	5.073	67.725	2.719	8.177	6.938	11.409	1	H1.2-1
60	M393	1400S350-97	0.628	3.75	21	0.183	26.25	y	20	5.073	67.725	2.719	8.177	6.938	11.409	1	H1.2-1
61	M394	1400S350-97	0.574	15	21	0.181	2.188	y	21	5.073	67.725	2.839	8.177	6.938	11.409	1	F3.1-1
62	M395	1400S350-97	0.576	15	21	0.157	1.875	y	20	5.073	67.725	3.084	8.177	6.938	11.409	1	F3.1-1
63	M396	1400S350-97	0.538	15.938	10	0.183	26.25	y	20	5.073	67.725	3.026	8.177	6.938	11.409	1	H1.2-1
64	M397	1400S350-97	0.812	15	20	0.201	30	y	20	5.073	67.725	3.084	8.177	6.938	11.409	1	F3.1-1
65	M398	1400S350-97	0.669	16.875	20	0.202	1.875	y	21	5.073	67.725	3.084	8.177	6.938	11.409	1	F3.1-1
66	M400	2-1400S350-97-BB	0.231	15	21	0.081	2.5	y	21	11.266	135.449	NC	16.354	13.876	-0.625	1	F3.1-1
67	M401	1400S350-97	0.817	15	20	0.201	30	y	21	5.073	67.725	3.084	8.177	6.938	11.409	1	F3.1-1
68	M402	1400S350-97	0.804	15	20	0.201	30	y	21	5.073	67.725	3.084	8.177	6.938	11.409	1	F3.1-1
69	M403	1400S350-97	0.595	15	20	0.226	1.875	y	21	5.073	67.725	2.839	8.177	6.938	11.409	1	F3.1-1
70	M404	1400S350-97	0.823	15	20	0.201	30	y	20	5.073	67.725	3.084	8.177	6.938	11.409	1	F3.1-1
71	M405	1400S350-97	0.571	15.625	10	0.22	26.25	y	20	5.073	67.725	3.026	8.177	6.938	11.409	1	H1.2-1
72	M406	1400S350-97	0.592	16.563	20	0.259	2.188	y	20	5.073	67.725	3.084	8.177	6.938	11.409	1	F3.1-1
73	M407	1400S350-97	0.519	15.313	10	0.149	26.25	y	20	5.073	67.725	3.026	8.177	6.938	11.409	1	H1.2-1
74	M408	1400S350-97	0.805	3.75	20	0.2	26.25	y	20	5.073	67.725	2.719	8.177	6.938	11.409	1	H1.2-1
75	M409	1400S350-97	0.648	26.25	20	0.19	26.25	y	20	5.073	67.725	2.719	8.177	6.938	11.409	1	H1.2-1
76	M410	1400S350-97	0.81	14.375	20	0.26	0	y	21	5.073	67.725	3.084	8.177	6.938	11.409	1	F3.1-1
77	M411	1400S350-97	0.556	13.125	20	0.239	2.188	y	20	5.073	67.725	3.026	8.177	6.938	11.409	1	H1.1-2
78	M412	1400S350-97	0.449	26.25	20	0.135	26.25	y	20	5.073	67.725	2.719	8.177	6.938	11.409	1	H1.1-2
79	M413	1400S350-97	0.541	15	20	0.172	2.188	y	20	5.073	67.725	3.084	8.177	6.938	11.409	1	F3.1-1
80	M414	1400S350-97	0.789	15.625	20	0.257	30	y	21	5.073	67.725	2.839	8.177	6.938	11.409	1	F3.1-1
81	M415	1400S350-97	0.918	26.25	20	0.238	26.25	y	20	5.073	67.725	2.719	8.177	6.938	11.409	1	H1.2-1
82	M416	1400S350-97	0.584	15	26	0.162	1.875	y	20	5.073	67.725	2.719	8.177	6.938	11.409	1	H1.2-1
83	M417	1400S350-97	0.465	26.25	20	0.163	26.25	y	20	5.073	67.725	2.719	8.177	6.938	11.409	1	H1.2-1
84	M418	1400S350-97	0.601	13.125	20	0.222	28.125	y	20	5.073	67.725	3.084	8.177	6.938	11.409	1	F3.1-1
85	M420	2-1400S350-97-BB	0.212	15	21	0.052	27.5	y	21	11.266	135.449	NC	16.354	13.876	-0.625	1	F3.1-1
86	M421	1400S350-97	0.772	14.688	20	0.341	0	y	21	5.073	67.725	3.026	8.177	6.938	11.409	1	H1.1-2
87	M422	1400S350-97	0.555	15	20	0.204	1.875	y	20	5.073	67.725	3.084	8.177	6.938	11.409	1	F3.1-1
88	M423	1400S350-97	0.736	14.063	20	0.273	0	y	20	5.073	67.725	3.084	8.177	6.938	11.409	1	F3.1-1
89	M424	1400S350-97	0.538	26.25	20	0.188	26.25	y	20	5.073	67.725	2.719	8.177	6.938	11.409	1	H1.2-1
90	M425	1400S350-97	1.009	26.25	20	0.239	26.25	y	20	5.073	67.725	2.719	8.177	6.938	11.409	1	H1.2-1
91	M427	1400S350-97	0.758	16.875	20	0.222	30	y	21	5.073	67.725	3.084	8.177	6.938	11.409	1	F3.1-1
92	M428	2-1400S350-97-BB	0.209	15	21	0.072	27.813	y	20	11.266	135.449	NC	16.354	13.876	-0.625	1	F3.1-1
93	M429	1400S350-97	0.838	28.125	21	0.652	28.125	y	21	5.073	67.725	3.084	8.177	6.938	11.409	1	F3.1-1
94	M430	1400S350-97	0.691	16.563	20	0.208	2.188	y	20	5.073	67.725	3.084	8.177	6.938	11.409	1	F3.1-1
95	M431	1400S350-97	0.951	14.375	20	0.368	0	y	20	5.073	67.725	3.026	8.177	6.938	11.409	1	H1.1-2
96	M432	1400S350-97	0.878	3.75	20	0.213	3.75	y	20	5.073	67.725	2.719	8.177	6.938	11.409	1	H1.2-1
97	M433	1400S350-97	0.549	15	26	0.208	28.125	y	20	5.073	67.725	2.719	8.177	6.938	11.409	1	H1.2-1
98	M434	1400S350-97	0.817	15	20	0.201	30	y	20	5.073	67.725	3.084	8.177	6.938	11.409	1	F3.1-1
99	M435	1400S350-97	0.745	26.25	20	0.211	26.25	y	20	5.073	67.725	2.719	8.177	6.938	11.409	1	H1.2-1
100	M436	1400S350-97	0.541	15	20	0.229	27.813	y	20	5.073	67.725	3.084	8.177	6.938	11.409	1	F3.1-1
101	M437	1400S350-97	0.79	26.25	20	0.237	26.25	y	20	5.073	67.725	2.719	8.177	6.938	11.409	1	H1.2-1
102	M438	1400S350-97	0.557	15	20	0.257	28.125	y	20	5.073	67.725	3.084	8.177	6.938	11.409	1	F3.1-1
103	M439	1400S350-97	0.747	15.313	20	0.327	1.875	y	20	5.073	67.725	3.026	8.177	6.938	11.409	1	H1.1-2
104	M440	1400S350-97	0.786	26.25	20	0.258	26.25	y	20	5.073	67.725	2.719	8.177	6.938	11.409	1	H1.2-1
105	M441	1400S350-97	0.973	3.75	20	0.237	3.75	y	20	5.073	67.725	2.719	8.177	6.938	11.409	1	H1.2-1
106	M442	1400S350-97	0.638	9.063	26	0.19	0	y	21	5.073	67.725	2.719	8.177	6.938	11.409	1	H1.2-1
107	M443	1400S350-97	0.777	15.625	26	0.21	30	y	21	5.073	67.725	2.719	8.177	6.938	11.409	1	H1.2-1
108	M444	1400S350-97	0.552	14.688	21	0.148	30	y	21	5.073	67.725	2.839	8.177	6.938	11.409	1	F3.1-1
109	M445	2-1400S350-97-BB	0.492	15.313	20	0.076	30	y	21	11.266	135.449	NC	16.354	13.876	-0.625	1	H1.2-1
110	M446	1400S350-97	0.731	3.75	20	0.214	3.75	y	20	5.073	67.725	2.719	8.177	6.938	11.409	1	H1.2-1



**Envelope AISI S100-16: ASD Member Cold Formed Steel Code Checks (Continued)**

Member	Shape	Code Check	Loc[ft]	LC	Shear Check	Loc[ft]	Dir	LC	Pn/Om[k]	Tn/Om[k]	Mnyy/Om[k-ft]	Mnzz/Om[k-ft]	Vny/Om[k]	Vnz/Om[k]	Cb	Eqn	
111	M447	1400S350-97	0.722	15.938	21	0.248	1.875	y	20	5.073	67.725	2.839	8.177	6.938	11.409	1	F3.1-1
112	M448	1400S350-97	0.73	3.75	20	0.198	3.75	y	20	5.073	67.725	2.719	8.177	6.938	11.409	1	H1.2-1
113	M449	1400S350-97	0.732	15.938	21	0.221	2.188	y	20	5.073	67.725	3.084	8.177	6.938	11.409	1	F3.1-1
114	M450	1400S350-97	0.675	3.75	20	0.184	3.75	y	20	5.073	67.725	2.719	8.177	6.938	11.409	1	H1.2-1
115	M452	1400S350-97	0.538	3.75	20	0.189	30	y	21	5.073	67.725	2.719	8.177	6.938	11.409	1	H1.2-1
116	M451	1400S350-97	0.591	13.125	27	0.196	0	y	20	5.073	67.725	2.719	8.177	6.938	11.409	1	H1.2-1
117	M455	1400S350-97	0.597	3.75	21	0.188	3.75	y	21	5.073	67.725	3.023	8.177	6.938	11.409	1	H1.2-1
118	M456	1400S350-97	0.507	15	27	0.14	26.25	y	20	5.073	67.725	2.719	8.177	6.938	11.409	1	H1.2-1
119	M457	1400S350-97	0.51	15	27	0.139	3.75	y	20	5.073	67.725	2.719	8.177	6.938	11.409	1	H1.2-1
120	M458	1400S350-97	0.518	15	26	0.147	26.25	y	20	5.073	67.725	2.719	8.177	6.938	11.409	1	H1.2-1
121	M459	1400S350-97	0.44	26.25	21	0.144	26.25	y	20	5.073	67.725	3.023	8.177	6.938	11.409	1	H1.1-2
122	M460	1400S350-97	0.618	26.25	20	0.196	26.25	y	20	5.073	67.725	3.023	8.177	6.938	11.409	1	H1.2-1
123	M462	1400S350-97	0.726	17.5	21	0.245	30	y	21	5.073	67.725	2.839	8.177	6.938	11.409	1	F3.1-1

**Envelope Wall Panel Forces**

Wall Label	Elevation [ft]	Max	Axial [k]	LC	x Shear [k]	LC	z Shear [k]	LC	x-x Moment [k-ft]	LC	z-z Moment [k-ft]	LC	
1	WP1	0	max	15.479	20	10.24	7	0.316	20	0	27	77.411	26
2		0	min	-3.821	27	-4.216	26	-0.467	27	0	16	-260.815	16
3	WP2	0	max	73.211	20	4.721	27	0.258	21	0	26	146.325	21
4		0	min	-0.964	26	-5.395	13	-0.068	26	0	17	-68.382	27
5	WP3	0	max	71.376	20	5.233	27	0.137	21	0	26	158.769	21
6		0	min	-0.202	26	-7.161	17	-0.036	26	0	17	-68.169	27
7	WP4	0	max	70.896	20	5.79	27	0.098	21	0	26	154.846	21
8		0	min	-0.113	26	-6.908	17	-0.02	26	0	17	-75.814	27
9	WP5	0	max	70.416	20	4.676	27	0.019	21	0	26	138.588	21
10		0	min	-0.086	26	-7.73	17	-0.001	26	0	17	-53.254	27
11	WP6	0	max	70.413	20	6.861	11	0.005	21	0	12	111.037	21
12		0	min	0.138	26	-5.192	17	-0.002	4	0	15	-92.097	11
13	WP7	0	max	71.531	20	5.326	27	0.038	27	0	20	109.791	21
14		0	min	-0.221	26	-6.151	17	-0.109	16	0	27	-65.999	27
15	WP8	0	max	2.089	11	7.401	7	0.028	26	0	13	61.057	21
16		0	min	-2.725	6	-4.056	26	-0.447	13	0	26	-21.252	27
17	WP9	0	max	13.934	20	13.085	20	0.177	29	0	19	14.423	11
18		0	min	-3.925	26	-5.406	27	-0.203	15	0	29	-23.853	17
19	WP10	0	max	3.106	7	1.408	19	0.058	27	0	26	1.782	26
20		0	min	-0.758	26	-0.96	29	-0.406	17	-0.081	17	-5.391	15
21	WP11	0	max	55.074	20	3.42	27	0.096	29	0.081	21	28.56	13
22		0	min	-4.012	27	-4.521	17	-0.081	6	0	26	-2.856	27
23	WP12	0	max	10.226	21	2.779	26	2.069	13	0.001	27	151.505	21
24		0	min	-0.696	27	-10.462	17	-2.028	27	-0.001	13	-52.979	27
25	WP13	0	max	13.569	21	1.168	26	3.083	29	0.099	26	32.83	26
26		0	min	-1.402	26	-6.184	17	-3.341	11	-0.231	15	-148.109	17

**AISI S100-16: ASD Wall Panel CFS Code Checks (Axial)**

Wall Panel	Region	Stud Size	Stud Spacing[in]	Axial Check	Gov LC	Chord Size	Chord Axial Check	Gov LC	
1	WP1	R1	600S200-43	24	0.578	6	2-600S200-43-FF	0.498	16
2	WP2	R1	2-600S200-43-BB	24	0.759	6	2-600S200-43-FF	0.624	17
3	WP3	R1	2-600S200-43-BB	24	0.74	6	2-600S200-43-FF	0.643	17
4	WP4	R1	2-600S200-43-BB	24	0.736	6	2-600S200-43-FF	0.632	17
5	WP5	R1	2-600S200-43-BB	24	0.731	6	2-600S200-43-FF	0.595	17
6	WP6	R1	2-600S200-43-BB	24	0.731	6	2-600S200-43-FF	0.536	17
7	WP7	R1	2-600S200-43-BB	24	0.742	6	2-600S200-43-FF	0.538	17
8	WP8	R1	600S200-43	24	0.513	6	2-600S200-43-FF	0.145	6

***AISI S100-16: ASD Wall Panel CFS Code Checks (Axial) (Continued)***

Wall Panel	Region	Stud Size	Stud Spacing[in]	Axial Check	Gov LC	Chord Size	Chord Axial Check	Gov LC	
9	WP9	R1	2-600S200-54-BB	12	0.274	6	2-600S200-54-FF	1.098	16
10		R3	2-600S200-54-BB	12	0	N/A	2-600S200-54-FF	NC	NC
11	WP10	R1	600S200-43	24	0.529	6	2-600S200-43-FF	0.09	16
12	WP11	R1	2-600S200-43-BB	24	0.937	6	2-600S200-43-FF	0.702	17
13		R3	2-600S200-43-BB	24	1.001	6	2-600S200-43-FF	0.825	16
14	WP12	R1	600S200-43	24	0.09	6	2-600S200-43-FF	0.099	26
15	WP13	R1	2-600S200-43-BB	24	0	N/A	2-600S200-43-FF	NC	NC
16		R3	2-600S200-43-BB	24	0	N/A	2-600S200-43-FF	NC	NC
17		R6	2-600S200-43-BB	24	0.142	6	2-600S200-43-FF	0.396	16
18		R8	2-600S200-43-BB	24	0.216	6	2-600S200-43-FF	0.291	16
19		R10	2-600S200-43-BB	24	0.091	6	2-600S200-43-FF	0.14	16
20		R13	2-600S200-43-BB	24	0.11	6	2-600S200-43-FF	0.056	16
21		R15	2-600S200-43-BB	24	0.112	6	2-600S200-43-FF	0.043	6
22		R17	2-600S200-43-BB	24	0.099	6	2-600S200-43-FF	0.04	16
23		R20	2-600S200-43-BB	24	0.108	6	2-600S200-43-FF	0.131	16
24		R22	2-600S200-43-BB	24	0.224	6	2-600S200-43-FF	0.082	6
25		R24	2-600S200-43-BB	24	0.125	6	2-600S200-43-FF	0.275	17
26		R27	2-600S200-43-BB	24	0.084	6	2-600S200-43-FF	0.073	17
27		R29	2-600S200-43-BB	24	0.098	6	2-600S200-43-FF	0.069	17
28		R31	2-600S200-43-BB	24	0.141	6	2-600S200-43-FF	0.101	17
29		R34	2-600S200-43-BB	24	0.094	6	2-600S200-43-FF	0.279	17
30		R36	2-600S200-43-BB	24	0.231	6	2-600S200-43-FF	0.457	17
31		R38	2-600S200-43-BB	24	0.178	6	2-600S200-43-FF	0.647	17
32		R41	2-600S200-43-BB	24	0.009	6	2-600S200-43-FF	0.159	17
33		R43	2-600S200-43-BB	24	0.132	6	2-600S200-43-FF	0.154	17
34		R45	2-600S200-43-BB	24	0.196	6	2-600S200-43-FF	0.203	17
35		R50	2-600S200-43-BB	24	0.934	6	2-600S200-43-FF	0.669	17
36		R48	2-600S200-43-BB	24	0.084	6	2-600S200-43-FF	0.762	17

***AISI S100-16: ASD Wall Panel CFS Code Checks (In-Plane)***

Wall Panel	Shear Panel Label	Region	Shear Check	Shear Force[k/ft]	Gov LC	Hold-down Force[k]	Gov LC	
1	WP1	0.018 #8@6/12 33	R1	0.65	0.158	17	2.924	26
2	WP2	1/2 GYP@8/12 33	R1	0.69	0.079	13	NC	NC
3	WP3	1/2 GYP@8/12 33	R1	0.916	0.105	17	NC	NC
4	WP4	1/2 GYP@8/12 33	R1	0.883	0.102	17	NC	NC
5	WP5	1/2 GYP@8/12 33	R1	0.989	0.114	17	NC	NC
6	WP6	1/2 GYP@8/12 33	R1	0.878	0.101	11	NC	NC
7	WP7	1/2 GYP@8/12 33	R1	0.787	0.09	17	NC	NC
8	WP8	0.018 #8@6/12 33	R1	0.748	0.181	16	2.61	16
9	WP9	0.033 #8@2/12 54	R1	0.872	0.815	16	4.825	27
10		0.033 #8@2/12 54	R3	NC	0	N/A	NC	NC
11	WP10	0.018 #8@6/12 33	R1	0.29	0.07	15	0.32	10
12	WP11	1/2 GYP@4/4 33	R1	1.051	0.223	17	NC	NC
13		1/2 GYP@4/4 33	R3	1.458	0.31	6	1.886	26
14	WP12	0.018 #8@6/12 33	R1	0.18	0.044	17	NC	NC
15	WP13	0.030 #8@4/12 33 TALL	R1	NC	0	N/A	NC	NC
16		0.030 #8@4/12 33 TALL	R3	NC	0	N/A	NC	NC
17		0.030 #8@4/12 33 TALL	R6	0.364	0.175	16	1.944	16
18		0.030 #8@4/12 33 TALL	R8	0.266	0.128	16	1.476	16
19		0.030 #8@4/12 33 TALL	R10	0.399	0.191	16	0.442	27
20		0.030 #8@4/12 33 TALL	R13	0	0	16	0.125	27
21		0.030 #8@4/12 33 TALL	R15	0	0	16	0.079	26
22		0.030 #8@4/12 33 TALL	R17	0	0	17	0.074	27
23		0.030 #8@4/12 33 TALL	R20	0.238	0.114	17	0.416	27
24		0.030 #8@4/12 33 TALL	R22	0.071	0.034	17	0.075	6

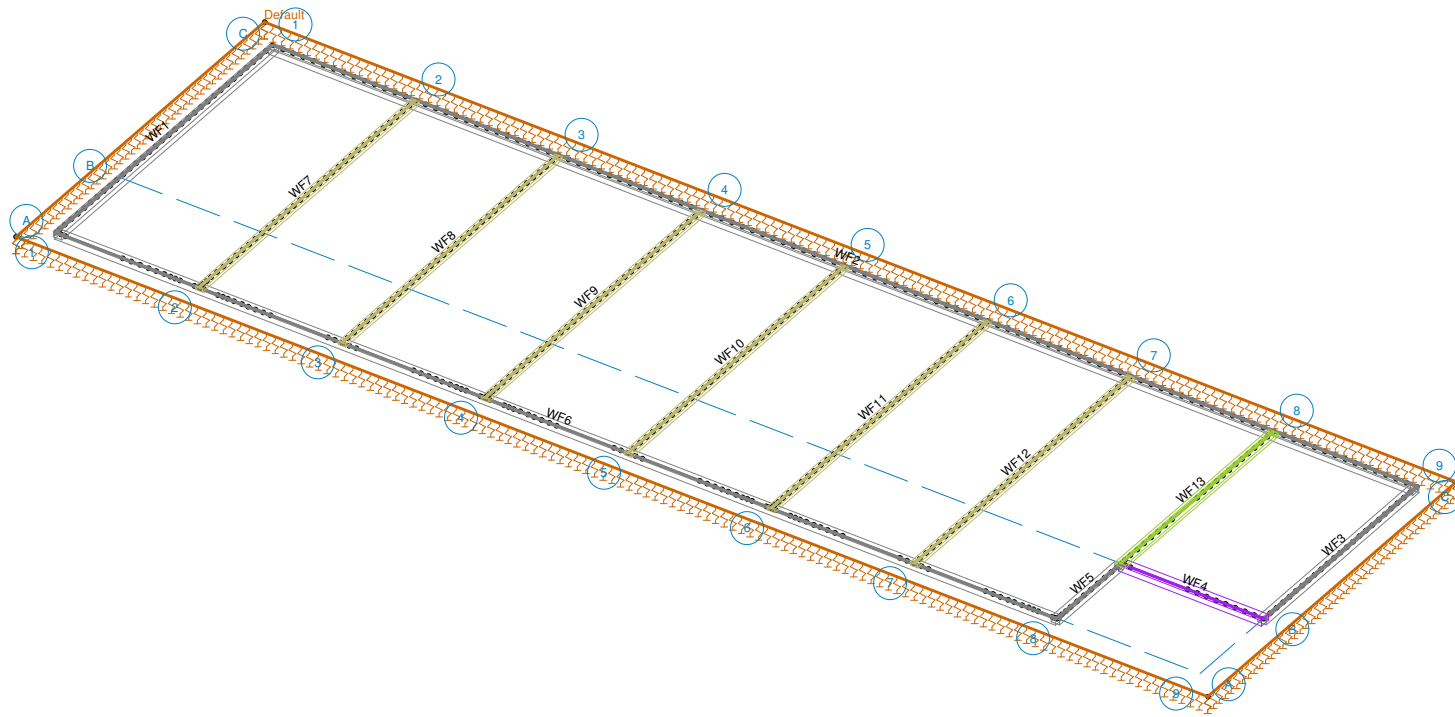


**AISI S100-16: ASD Wall Panel CFS Code Checks (In-Plane) (Continued)**

Wall Panel	Shear Panel Label	Region	Shear Check	Shear Force[k/ft]	Gov LC	Hold-down Force[k]	Gov LC
25	0.030 #8@4/12 33 TALL	R24	0.345	0.165	17	1.119	17
26	0.030 #8@4/12 33 TALL	R27	0	0	17	0.264	17
27	0.030 #8@4/12 33 TALL	R29	0	0	17	0.243	17
28	0.030 #8@4/12 33 TALL	R31	0	0	17	0.286	17
29	0.030 #8@4/12 33 TALL	R34	0.553	0.266	17	1.268	17
30	0.030 #8@4/12 33 TALL	R36	0.428	0.205	17	2.634	17
31	0.030 #8@4/12 33 TALL	R38	0.691	0.332	17	3.544	17
32	0.030 #8@4/12 33 TALL	R41	0	0	17	0.979	17
33	0.030 #8@4/12 33 TALL	R43	0	0	17	0.721	17
34	0.030 #8@4/12 33 TALL	R45	0	0	17	0.926	17
35	0.030 #8@4/12 33 TALL	R50	0	0	17	1.798	17
36	0.030 #8@4/12 33 TALL	R48	0.952	0.457	16	4.573	17



Wall Sets	
Ext Footing	Grey
Grid B	Purple
Int Footing	Green
Int Grid B	Light Green



Results for LC 1, ASCE 1

Rodgers Mountain Consultants, LLC
R. Lonbeck
22-143

Lot 7, cottage Grove Industrial Park Fdn

SK - 1
June 5, 2023 at 11:43 AM
Lot 7, Cottage Grove Industrial Park - 2.r3d



Company : Rodgers Mountain Consultants, LLC  
 Designer : R. Lonbeck  
 Job Number : 22-143  
 Model Name : Lot 7, cottage Grove Industrial Park Fdn

June 5, 2023  
 11:46 AM  
 Checked By: \_\_\_\_\_

### Concrete Properties

	Label	E [ksi]	G [ksi]	Nu	Therm (/1E...	Density[k/ft...	f'c[ksi]	Lambda	Flex Steel[...	Shear Stee...
1	Conc2500NW	2850		0.15	0.6	0.145	2.5	1	60	60
2	Conc3000NW	3156	1372	0.15	0.6	0.145	3	1	60	60
3	Conc3500NW	3409	1482	0.15	0.6	0.145	3.5	1	60	60
4	Conc4000NW	3644	1584	0.15	0.6	0.145	4	1	60	60
5	Conc3000LW	2085	907	0.15	0.6	0.11	3	0.75	60	60
6	Conc3500LW	2252	979	0.15	0.6	0.11	3.5	0.75	60	60
7	Conc4000LW	2408	1047	0.15	0.6	0.11	4	0.75	60	60

### Soil Definitions

	Label	Subgrade Modulus[k/ft^3]	Allowable Bearing[ksf]	Depth Properties	Default?
1	Default	100	1.5	None	Yes

### Footing/Pile Cap Rebar Parameters

	Label	Top Bar	Bottom Bar
1	Top Track	#4	#4
2	Load Track	#6	#6
3	Purlin	#6	#6
4	Ridge Purlin	#6	#6
5	Stud	#6	#6
6	Dbl Stud	#6	#6

### Pedestal/Pile Rebar Parameters

	Label	Longitudinal Bar	Shear Tie	Bar Cover[in]
1	Top Track	#6	#4	1.5
2	Load Track	#6	#4	1.5
3	Purlin	#6	#4	1.5
4	Ridge Purlin	#6	#4	1.5
5	Stud	#6	#4	1.5
6	Dbl Stud	#6	#4	1.5

### Wall Footing General

	Label	Wall Type	Wall Co...	Wall Mat...	Foot Mat...	Wall Hei...	Soil Heig...	Water He...	Proppe...	Foot Restr...	Wall/Foot Cont...	Foot Do...
1	Ext Footing	Strip Foo...	Concrete	Conc250...	Conc250...	0	0	0	No	Yes	No(Rough)	1 Layer
2	Grid B	Strip Foo...	Concrete	Conc250...	Conc250...	0	0	0	No	Yes	No(Rough)	1 Layer
3	Int Footing	Strip Foo...	Concrete	Conc250...	Conc250...	0	0	0	No	Yes	Yes	N/A
4	Int Grid 8	Strip Foo...	Concrete	Conc250...	Conc250...	0	0	0	No	Yes	Yes	N/A

### Wall Footing Geometry

	Label	Wall Thic...	Foot Thic...	Toe Leng...	Heel Leng...	Key Width...	Key Depth...	Key Offse...	Wall Batte...	Toe Batter...	Heel Batte...
1	Ext Footing	6	14	0.25	1	0	0	0	No	N/A	N/A
2	Grid B	6	14	0.5	1.25	0	0	0	No	N/A	N/A
3	Int Footing	6	8	0.5	0.5	32	18	-6	No	N/A	N/A
4	Int Grid 8	6	8	0.75	0.75	32	18	-6	No	N/A	N/A

### Wall Footing Soil

	Label	Meth...	Gamm...	Phi He...	K La...	Gamm...	Phi T...	K Lat ...	Delta ...	Backfil...	Heel ...	Toe D...	EQ M...	Kh	Gamm...	Phi Sa...	K Lat ...
1	Ext Fo...	Ran...	0.124	30		0.124	30		N/A	0	0.5	12	N/A	N/A	N/A	N/A	N/A
2	Grid B	Ran...	0.124	30		0.124	30		N/A	0	0.5	12	N/A	N/A	N/A	N/A	N/A
3	Int Fo...	Ran...	0.124	25	0.33	0.124	25	3	N/A	15	0	7	N/A	N/A	N/A	N/A	N/A
4	Int Gri...	Ran...	0.124	25	0.33	0.124	25	3	N/A	15	0	7	N/A	N/A	N/A	N/A	N/A



### Concrete Wall Properties

Label	Location	Int Bar	Min Int B...	Max Int B...	Ext Bar	Min Ext B...	Max Ext ...	Bar Inc...	Int Cove...	Ext Cov...	Hor Bar ...	Hor Bar ...	Outer ...	
1	Ext Fo...	Each F...	#7	6	18	#8	6	18	1	3	1.5	#4	18	Vertical
2	Grid B	Each F...	#7	6	18	#8	6	18	1	3	1.5	#4	18	Vertical
3	Int Foo...	Single ...	#6	6	12	N/A	N/A	N/A	2	3	N/A	#5	18	N/A
4	Int Grid...	Single ...	#6	6	12	N/A	N/A	N/A	2	3	N/A	#5	18	N/A

### Footing Properties

Label	Location	Bot Bar	Min Bot B...	Max Bot ...	Top B...	Min Top B...	Max Top ...	Bar Inc...	Top Co...	Bot Cov...	Long Bar ...	Long Bar ...	
1	Ext Footing	Single ...	#4	4	18	N/A	N/A	N/A	1	N/A	3	#4	7
2	Grid B	Single ...	#4	4	18	N/A	N/A	N/A	1	N/A	3	#4	7
3	Int Footing	Single ...	#4	6	18	N/A	N/A	N/A	2	N/A	3	#4	8
4	Int Grid 8	Single ...	#4	6	18	N/A	N/A	N/A	2	N/A	3	#4	8

### Wall Footings

	Label	Start Point	End Point	Definition
1	WF1	R3D N1	R3D N2	Ext Footing
2	WF2	R3D N2	R3D N36	Ext Footing
3	WF3	R3D N36	R3D N33	Ext Footing
4	WF4	R3D N33	R3D N38	Grid B
5	WF5	R3D N38	R3D N29	Ext Footing
6	WF6	R3D N29	R3D N1	Ext Footing
7	WF7	R3D N5	R3D N6	Int Footing
8	WF8	R3D N9	R3D N12	Int Footing
9	WF9	R3D N13	R3D N16	Int Footing
10	WF10	R3D N17	R3D N20	Int Footing
11	WF11	R3D N21	R3D N24	Int Footing
12	WF12	R3D N25	R3D N28	Int Footing
13	WF13	R3D N38	R3D N32	Int Grid 8

### Load Combinations

Label	S...	Serv...	A...	SF	Cat...	Fa...	Cat...	Fa...	Cat...	Fa...	Cat...	Fa...	Cat...	Fa...	Cat...	Fa...	Cat...	Fa...	Cat...	Fa...
1	ASCE 1	Yes	Yes	1.5	DL	1														
2	ASCE 2	Yes	Yes	1.5	DL	1	HL	1	LL	1	LLS	1								
3	ASCE 3	Yes	Yes	1.5	DL	1	HL	1	RLL	1										
4	ASCE 3	Yes	Yes	1.5	DL	1	HL	1	SL	1										
5	ASCE 3	Yes	Yes	1.5	DL	1	HL	1	RL	1										
6	ASCE 4	Yes	Yes	1.5	DL	1	HL	1	LL	0.75	LLS	0.75	RLL	0.75						
7	ASCE 4	Yes	Yes	1.5	DL	1	HL	1	LL	0.75	LLS	0.75	SL	0.75	SLN	0.75				
8	ASCE 4	Yes	Yes	1.5	DL	1	HL	1	LL	0.75	LLS	0.75	RL	0.75						
9	ASCE 5	Yes	Yes	1.5	DL	1	HL	1	WL	0.6										
10	ASCE 5	Yes	Yes	1.5	DL	1	HL	1	WL	-0.6										
11	ASCE 5	Yes	Yes	1.5	DL	1	HL	1	WL	0.6										
12	ASCE 5	Yes	Yes	1.5	DL	1	HL	1	WL	-0.6										
13	ASCE 6	Yes	Yes	1.5	DL	1	HL	1	WL	0.45	LL	0.75	LLS	0.75	RLL	0.75				
14	ASCE 6	Yes	Yes	1.5	DL	1	HL	1	WL	-0.45	LL	0.75	LLS	0.75	RLL	0.75				
15	ASCE 6	Yes	Yes	1.5	DL	1	HL	1	WL	0.45	LL	0.75	LLS	0.75	RLL	0.75				
16	ASCE 6	Yes	Yes	1.5	DL	1	HL	1	WL	-0.45	LL	0.75	LLS	0.75	RLL	0.75				
17	ASCE 6	Yes	Yes	1.5	DL	1	HL	1	WL	0.45	LL	0.75	LLS	0.75	SL	0.75				
18	ASCE 6	Yes	Yes	1.5	DL	1	HL	1	WL	-0.45	LL	0.75	LLS	0.75	SL	0.75				
19	ASCE 6	Yes	Yes	1.5	DL	1	HL	1	WL	0.45	LL	0.75	LLS	0.75	SL	0.75				
20	ASCE 6	Yes	Yes	1.5	DL	1	HL	1	WL	-0.45	LL	0.75	LLS	0.75	SL	0.75				
21	ASCE 6	Yes	Yes	1.5	DL	1	HL	1	WL	0.45	LL	0.75	LLS	0.75	RL	0.75				
22	ASCE 6	Yes	Yes	1.5	DL	1	HL	1	WL	-0.45	LL	0.75	LLS	0.75	RL	0.75				
23	ASCE 7	Yes	Yes		DL	0.6	HL	1	WL	0.6										
24	ASCE 7	Yes	Yes		DL	0.6	HL	1	WL	-0.6										
25	ASCE 7	Yes	Yes		DL	0.6	HL	1	WL	0.6										



**Load Combinations (Continued)**

Label	S...	Serv...	A...	SF	Cat...	Fa...	Cat...	Fa...	Cat...	Fa...	Cat...	Fa...	Cat...	Fa...	Cat...	Fa...	Cat...	Fa...
26	ASCE 7	Yes	Yes		DL	0.6	HL	1	WL	-0.6								
27	ASCE 7	Yes	Yes		DL	0.6	HL	0.6	WL	0.6								
28	ASCE 7	Yes	Yes		DL	0.6	HL	0.6	WL	-0.6								
29	ASCE 7	Yes	Yes		DL	0.6	HL	0.6	WL	0.6								
30	ASCE 7	Yes	Yes		DL	0.6	HL	0.6	WL	-0.6								
31	ACI 9-1	Yes			DL	1.4												
32	ACI 9-2 (...)	Yes			DL	1.2	LL	1.6	HL	1.6	RLL	0.5						
33	ACI 9-2 (...)	Yes			DL	1.2	LL	1.6	HL	1.6	SL	0.5						
34	ACI 9-2 (...)	Yes			DL	1.2	LL	1.6	HL	1.6	RL	0.5						
35	ACI 9-3 (...)	Yes			DL	1.2	RLL	1.6	LL	1								
36	ACI 9-3 (...)	Yes			DL	1.2	SL	1.6	LL	1								
37	ACI 9-3 (...)	Yes			DL	1.2	RL	1.6	LL	1								
38	ACI 9-3 (...)	Yes			DL	1.2	RLL	1.6	WL	0.8								
39	ACI 9-3 (...)	Yes			DL	1.2	RLL	1.6	WL	-0.8								
40	ACI 9-3 (...)	Yes			DL	1.2	RLL	1.6	WL	0.8								
41	ACI 9-3 (...)	Yes			DL	1.2	RLL	1.6	WL	-0.8								
42	ACI 9-3 (...)	Yes			DL	1.2	SL	1.6	WL	0.8								
43	ACI 9-3 (...)	Yes			DL	1.2	SL	1.6	WL	-0.8								
44	ACI 9-3 (...)	Yes			DL	1.2	SL	1.6	WL	0.8								
45	ACI 9-3 (...)	Yes			DL	1.2	SL	1.6	WL	-0.8								
46	ACI 9-3 (...)	Yes			DL	1.2	RL	1.6	WL	0.8								
47	ACI 9-3 (...)	Yes			DL	1.2	RL	1.6	WL	-0.8								
48	ACI 9-4 (...)	Yes			DL	1.2	WL	1.6	LL	1	RLL	0.5						
49	ACI 9-4 (...)	Yes			DL	1.2	WL	-1.6	LL	1	RLL	0.5						
50	ACI 9-4 (...)	Yes			DL	1.2	WL	1.6	LL	1	RLL	0.5						
51	ACI 9-4 (...)	Yes			DL	1.2	WL	-1.6	LL	1	RLL	0.5						
52	ACI 9-4 (...)	Yes			DL	1.2	WL	1.6	LL	1	SL	0.5						
53	ACI 9-4 (...)	Yes			DL	1.2	WL	-1.6	LL	1	SL	0.5						
54	ACI 9-4 (...)	Yes			DL	1.2	WL	1.6	LL	1	SL	0.5						
55	ACI 9-4 (...)	Yes			DL	1.2	WL	-1.6	LL	1	SL	0.5						
56	ACI 9-4 (...)	Yes			DL	1.2	WL	1.6	LL	1	RL	0.5						
57	ACI 9-4 (...)	Yes			DL	1.2	WL	-1.6	LL	1	RL	0.5						
58	ACI 9-6 (...)	Yes			DL	0.9	WL	1.6	HL	1.6								
59	ACI 9-6 (...)	Yes			DL	0.9	WL	-1.6	HL	1.6								
60	ACI 9-6 (...)	Yes			DL	0.9	WL	1.6	HL	1.6								
61	ACI 9-6 (...)	Yes			DL	0.9	WL	-1.6	HL	1.6								
62	ACI 9-6 (...)	Yes			DL	0.9	WL	1.6										
63	ACI 9-6 (...)	Yes			DL	0.9	WL	-1.6										
64	ACI 9-6 (...)	Yes			DL	0.9	WL	1.6										
65	ACI 9-6 (...)	Yes			DL	0.9	WL	-1.6										

**Wall Footing Code Check**

Label	Top Fle...	Top Fle...	Bot Flex...	Bot Flex...	Heel She...	Heel She...	Toe She...	Toe She...	Phi * Mn...	Phi * Vn...	Phi * Mn...	Phi * Vn...	
1	WF1	0.018(H...	60	0.003(H...	51	0.063	60	0	39	4.323	2.4	15.683	5.328
2	WF2	0.012(H...	51	0.003(H...	60	0.052	40	0	51	4.323	2.4	15.683	5.328
3	WF3	0.013(H...	60	0.004(H...	39	0.061	31	0	60	4.323	2.4	15.683	5.328
4	WF4	0.028(H...	58	0.009(H...	51	0.079	58	0	39	4.323	2.4	15.683	5.328
5	WF5	0.013(H...	51	0.001(T...	41	0.062	31	0	41	4.323	2.4	15.683	5.328
6	WF6	0.011(H...	50	0.003(H...	61	0.053	38	0	40	4.323	2.4	15.683	5.328
7	WF7	0.004(H...	58	0.038(H...	39	0.056	39	0.048	39	2.668	2.005	3.993	2.583
8	WF8	0.004(H...	58	0.036(H...	39	0.053	39	0.046	39	2.668	2.005	3.993	2.583
9	WF9	0.004(H...	58	0.036(H...	39	0.053	39	0.046	39	2.668	2.005	3.993	2.583
10	WF10	0.004(H...	58	0.036(T...	39	0.052	39	0.046	39	2.668	2.005	3.993	2.583
11	WF11	0.004(H...	58	0.036(T...	39	0.052	39	0.046	39	2.668	2.005	3.993	2.583
12	WF12	0.004(H...	58	0.036(T...	39	0.053	39	0.047	39	2.668	2.005	3.993	2.583
13	WF13	0.009(H...	58	0.069(T...	39	0.16	39	0.134	39	2.668	2.005	3.993	2.583



### Wall Code Check

	Label	UC Max Int	UC Int LC	UC Max Ext	UC Ext LC	Max Shear...	Max Shear...	UC Max D...	Phi * Mn In...	Phi * Mn E...	Wall Phi *...
1	WF1	NC	NC	NC	NC	NC	NC	NC	No Val	No Val	No Val
2	WF2	NC	NC	NC	NC	NC	NC	NC	No Val	No Val	No Val
3	WF3	NC	NC	NC	NC	NC	NC	NC	No Val	No Val	No Val
4	WF4	NC	NC	NC	NC	NC	NC	NC	No Val	No Val	No Val
5	WF5	NC	NC	NC	NC	NC	NC	NC	No Val	No Val	No Val
6	WF6	NC	NC	NC	NC	NC	NC	NC	No Val	No Val	No Val
7	WF7	NC	NC	NC	NC	NC	NC	NC	No Val	No Val	No Val
8	WF8	NC	NC	NC	NC	NC	NC	NC	No Val	No Val	No Val
9	WF9	NC	NC	NC	NC	NC	NC	NC	No Val	No Val	No Val
10	WF10	NC	NC	NC	NC	NC	NC	NC	No Val	No Val	No Val
11	WF11	NC	NC	NC	NC	NC	NC	NC	No Val	No Val	No Val
12	WF12	NC	NC	NC	NC	NC	NC	NC	No Val	No Val	No Val
13	WF13	NC	NC	NC	NC	NC	NC	NC	No Val	No Val	No Val

### Wall Footing Geometry

	Label	Wall Height[ft]	Wall Thick[in]	Toe Length[ft]	Heel Length[ft]	Foot Thick[in]	Key Depth[in]	Key Width[in]
1	WF1	NC	NC	0.25	1	14	NC	NC
2	WF2	NC	NC	0.25	1	14	NC	NC
3	WF3	NC	NC	0.25	1	14	NC	NC
4	WF4	NC	NC	0.5	1.25	14	NC	NC
5	WF5	NC	NC	0.25	1	14	NC	NC
6	WF6	NC	NC	0.25	1	14	NC	NC
7	WF7	NC	NC	0.5	0.5	8	NC	NC
8	WF8	NC	NC	0.5	0.5	8	NC	NC
9	WF9	NC	NC	0.5	0.5	8	NC	NC
10	WF10	NC	NC	0.5	0.5	8	NC	NC
11	WF11	NC	NC	0.5	0.5	8	NC	NC
12	WF12	NC	NC	0.5	0.5	8	NC	NC
13	WF13	NC	NC	0.75	0.75	8	NC	NC

### Wall Footing Steel

	Label	Int Wall Verts	Ext Wall Verts	Wall Horz Bars	Foot Top Bars	Foot Bot Bars	Foot Long Bars	Dowel Bars
1	WF1	NC	NC	NC		#4@7in	#4@7in	NC
2	WF2	NC	NC	NC		#4@7in	#4@7in	NC
3	WF3	NC	NC	NC		#4@7in	#4@7in	NC
4	WF4	NC	NC	NC		#4@7in	#4@7in	NC
5	WF5	NC	NC	NC		#4@7in	#4@7in	NC
6	WF6	NC	NC	NC		#4@7in	#4@7in	NC
7	WF7	NC	NC	NC		#4@12in	#4@8in	NC
8	WF8	NC	NC	NC		#4@12in	#4@8in	NC
9	WF9	NC	NC	NC		#4@12in	#4@8in	NC
10	WF10	NC	NC	NC		#4@12in	#4@8in	NC
11	WF11	NC	NC	NC		#4@12in	#4@8in	NC
12	WF12	NC	NC	NC		#4@12in	#4@8in	NC
13	WF13	NC	NC	NC		#4@12in	#4@8in	NC

### Wall Footing Stability

	Label	Bearing UC	Bearing LC	Max Bearing[ksf]	OT UC	OT UC LC	MOT[k-ft/ft]	Sliding UC	Sliding LC	Sliding Force[k/ft]
1	WF1	0.288	14	0.432	0.304	25	0.05	NC	NC	NC
2	WF2	0.237	16	0.356	0.318	25	0.053	NC	NC	NC
3	WF3	0.213	11	0.319	0.809	14	0.14	NC	NC	NC
4	WF4	0.429	3	0.643	0.591	23	0.173	NC	NC	NC
5	WF5	0.328	16	0.492	0.368	23	0.064	NC	NC	NC
6	WF6	0.204	3	0.307	0.213	23	0.035	NC	NC	NC
7	WF7	0.537	14	0.806	0.801	23	0.202	NC	NC	NC



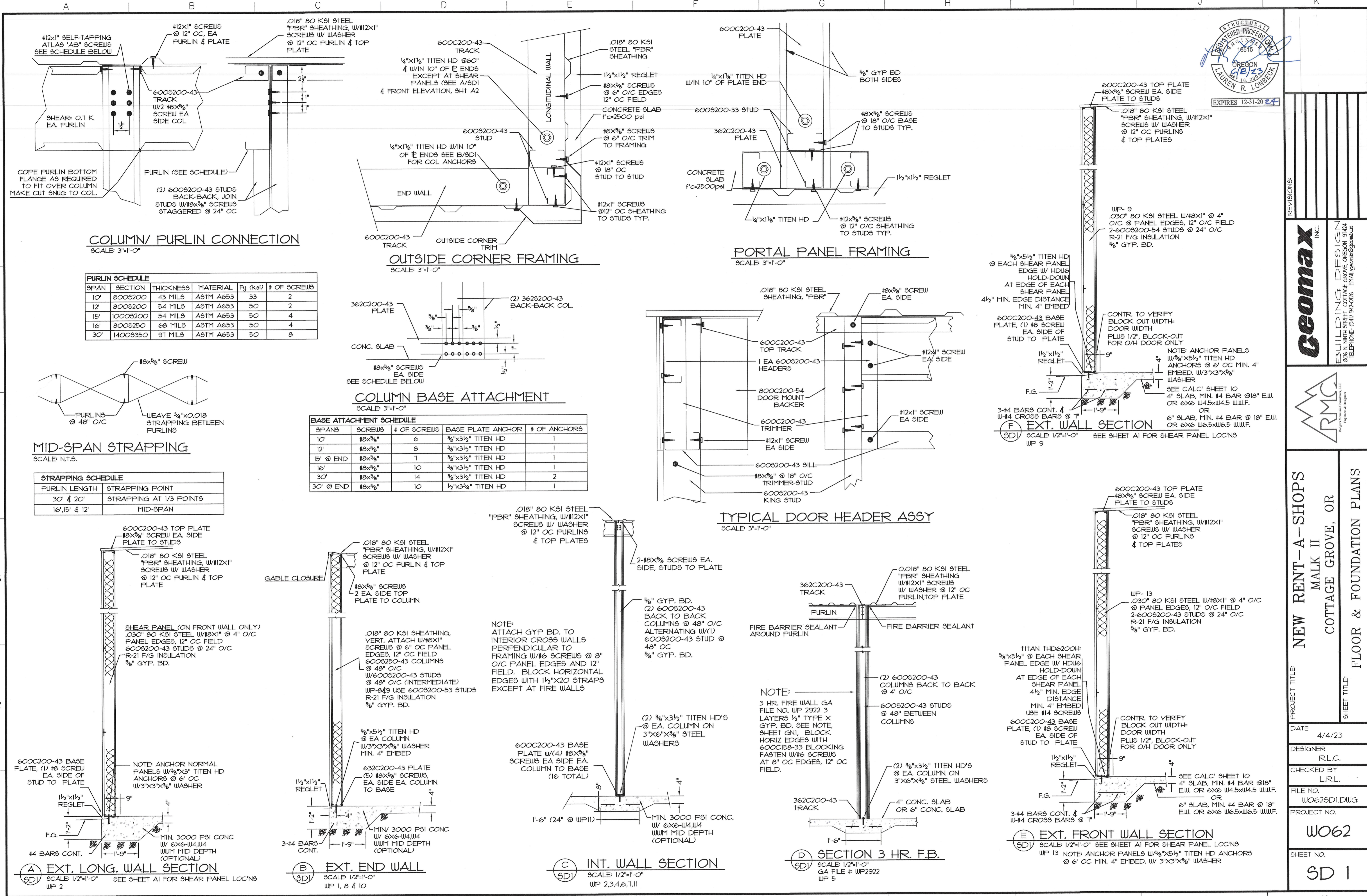


Company : Rodgers Mountain Consultants, LLC  
 Designer : R. Lonbeck  
 Job Number : 22-143  
 Model Name : Lot 7, cottage Grove Industrial Park Fdn

June 5, 2023  
 11:46 AM  
 Checked By: \_\_\_\_\_

**Wall Footing Stability (Continued)**

	Label	Bearing UC	Bearing LC	Max Bearing[ksf]	OT UC	OT UC LC	MOT[k-ft/ft]	Sliding UC	Sliding LC	Sliding Force[k/ft]
8	WF8	0.518	14	0.776	0.755	23	0.19	NC	NC	NC
9	WF9	0.519	14	0.778	0.75	23	0.189	NC	NC	NC
10	WF10	0.512	14	0.768	0.746	23	0.187	NC	NC	NC
11	WF11	0.516	14	0.774	0.74	23	0.187	NC	NC	NC
12	WF12	0.519	14	0.779	0.756	23	0.191	NC	NC	NC
13	WF13	0.438	14	0.657	0.971	25	0.338	NC	NC	NC

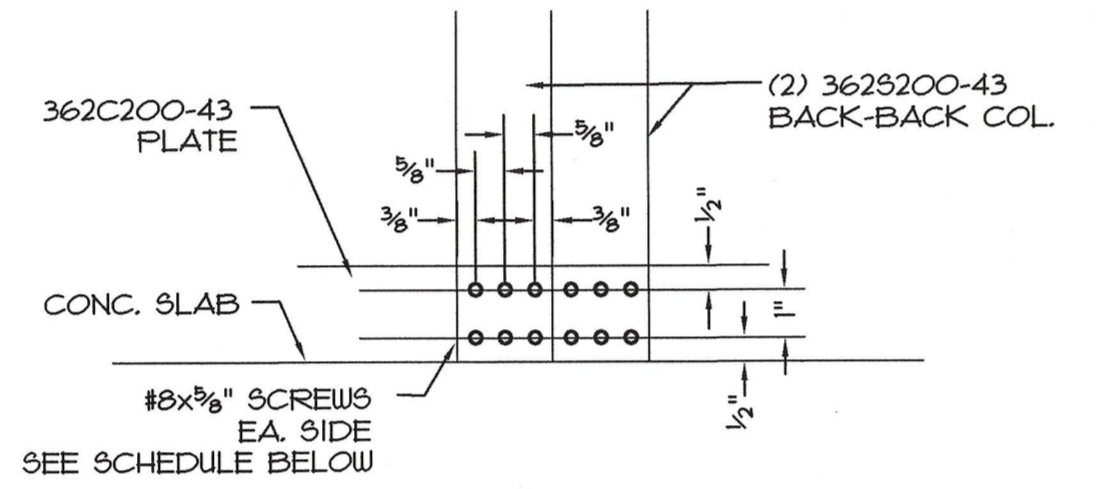


**COLUMN/PURLIN CONNECTION**  
SCALE: 3"-1'-0"

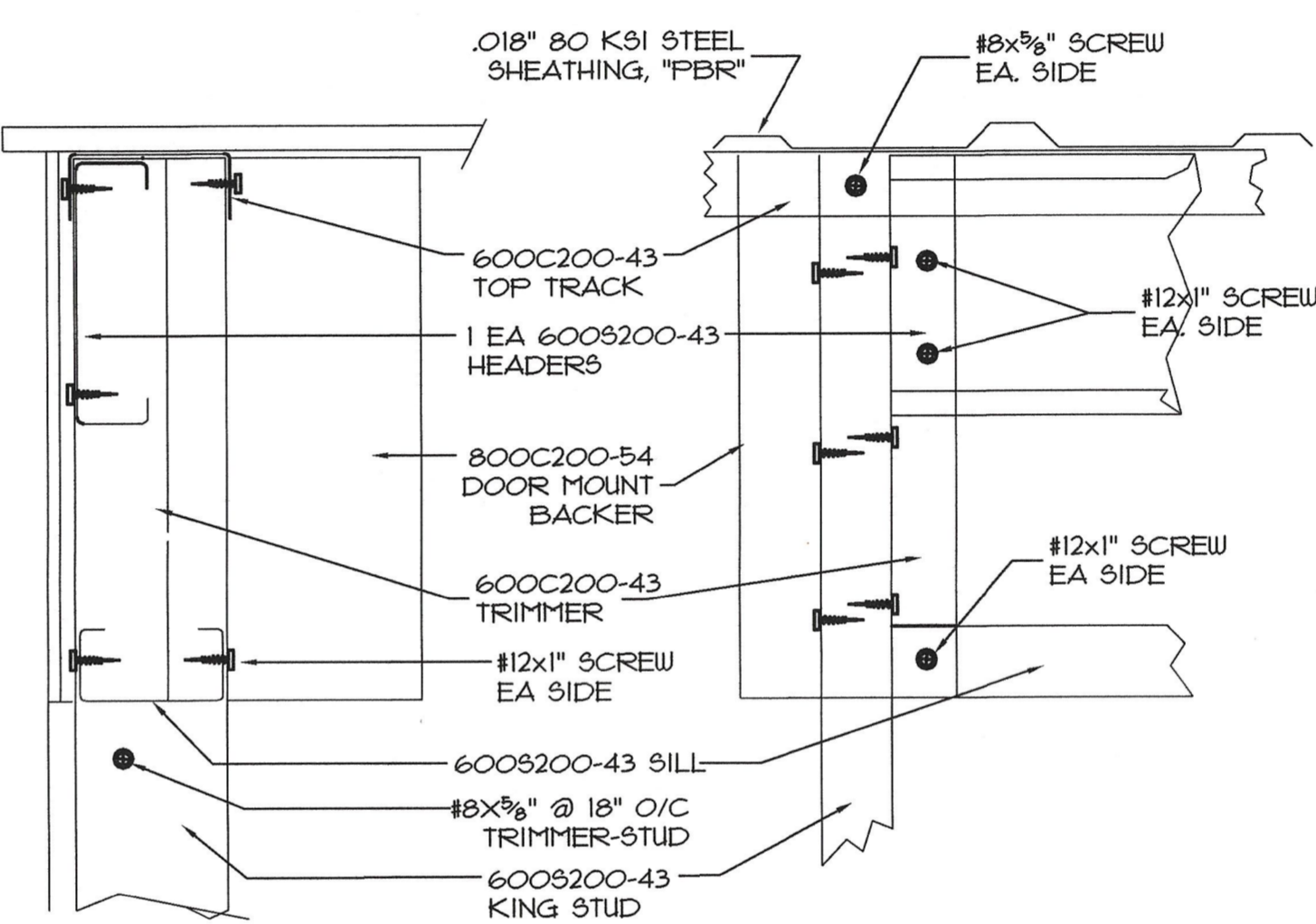
**FURLIN SCHEDULE**

SPAN	SECTION	THICKNESS	MATERIAL	F <sub>y</sub> (ksi)	# OF SCREWS
10'	800S200	43 MILS	A57M A653	33	2
12'	800S200	54 MILS	A57M A653	50	2
15'	1000S200	54 MILS	A57M A653	50	4
16'	800S250	68 MILS	A57M A653	50	4
30'	1400S350	91 MILS	A57M A653	50	8

**OUTSIDE CORNER FRAMING**  
SCALE: 3"-1'-0"



**PORTAL PANEL FRAMING**  
SCALE: 3"-1'-0"



**COLUMN BASE ATTACHMENT**  
SCALE: 3"-1'-0"

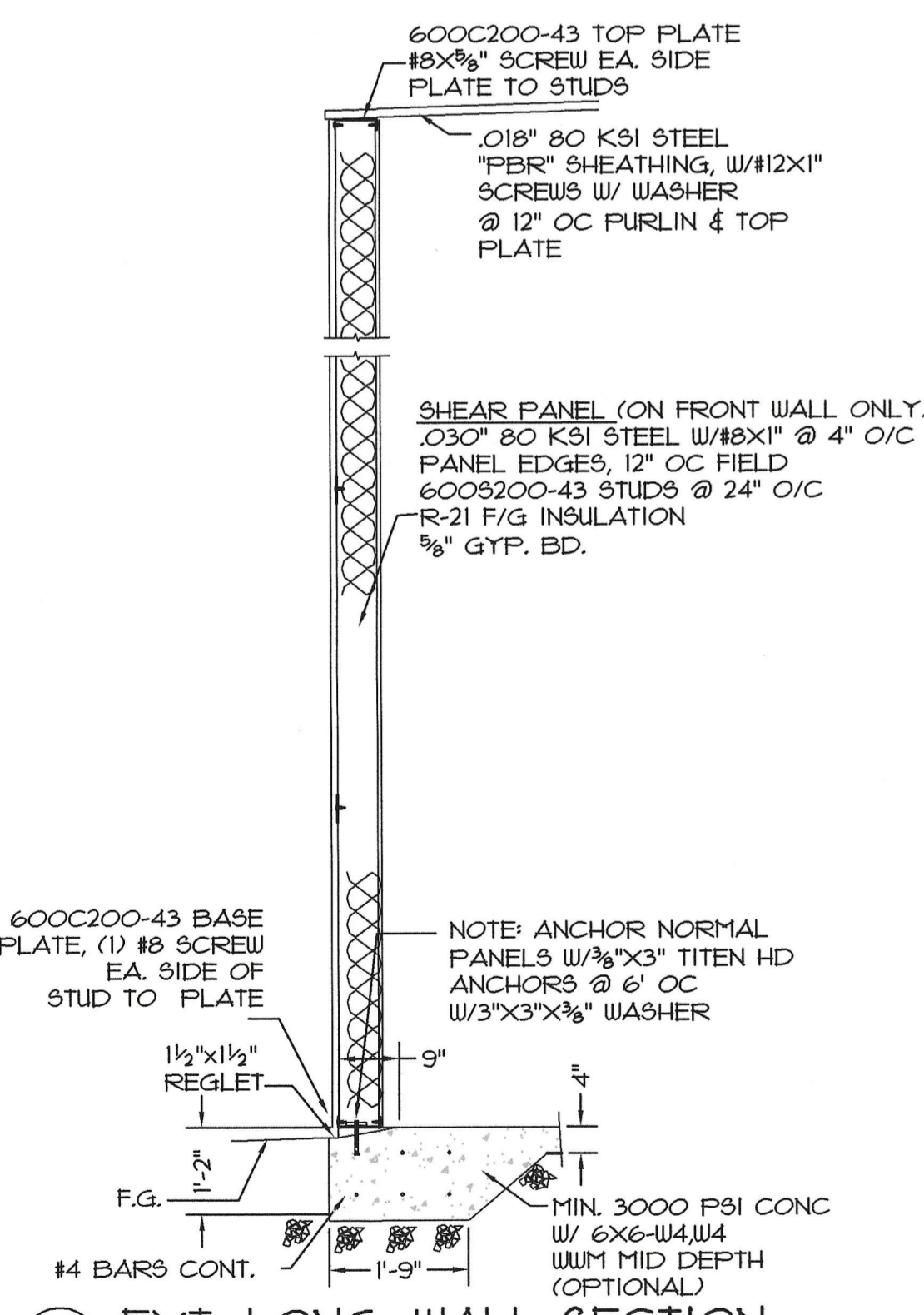
**BASE ATTACHMENT SCHEDULE**

SPANS	SCREWS	# OF SCREWS	BASE PLATE ANCHOR	# OF ANCHORS
10'	#8x3/8"	6	3/8"x3 1/2" TITEN HD	1
12'	#8x3/8"	8	3/8"x3 1/2" TITEN HD	1
15' @ END	#8x3/8"	7	3/8"x3 1/2" TITEN HD	1
16'	#8x3/8"	10	3/8"x3 1/2" TITEN HD	1
30'	#8x3/8"	14	3/8"x3 1/2" TITEN HD	2
30' @ END	#8x3/8"	10	1/2"x3 3/4" TITEN HD	1

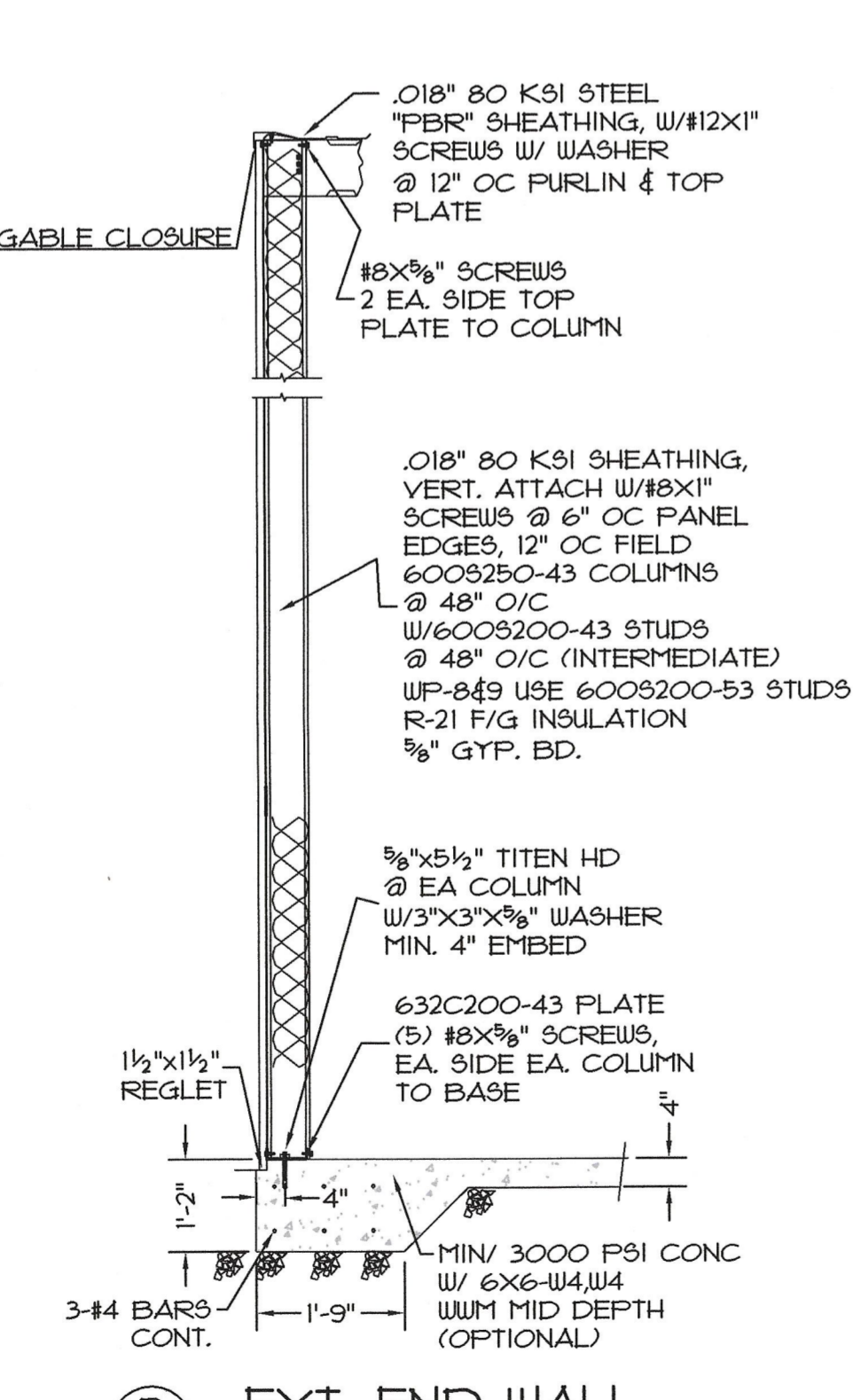
**MID-SPAN STRAPPING**  
SCALE: N.T.S.

**STRAPPING SCHEDULE**

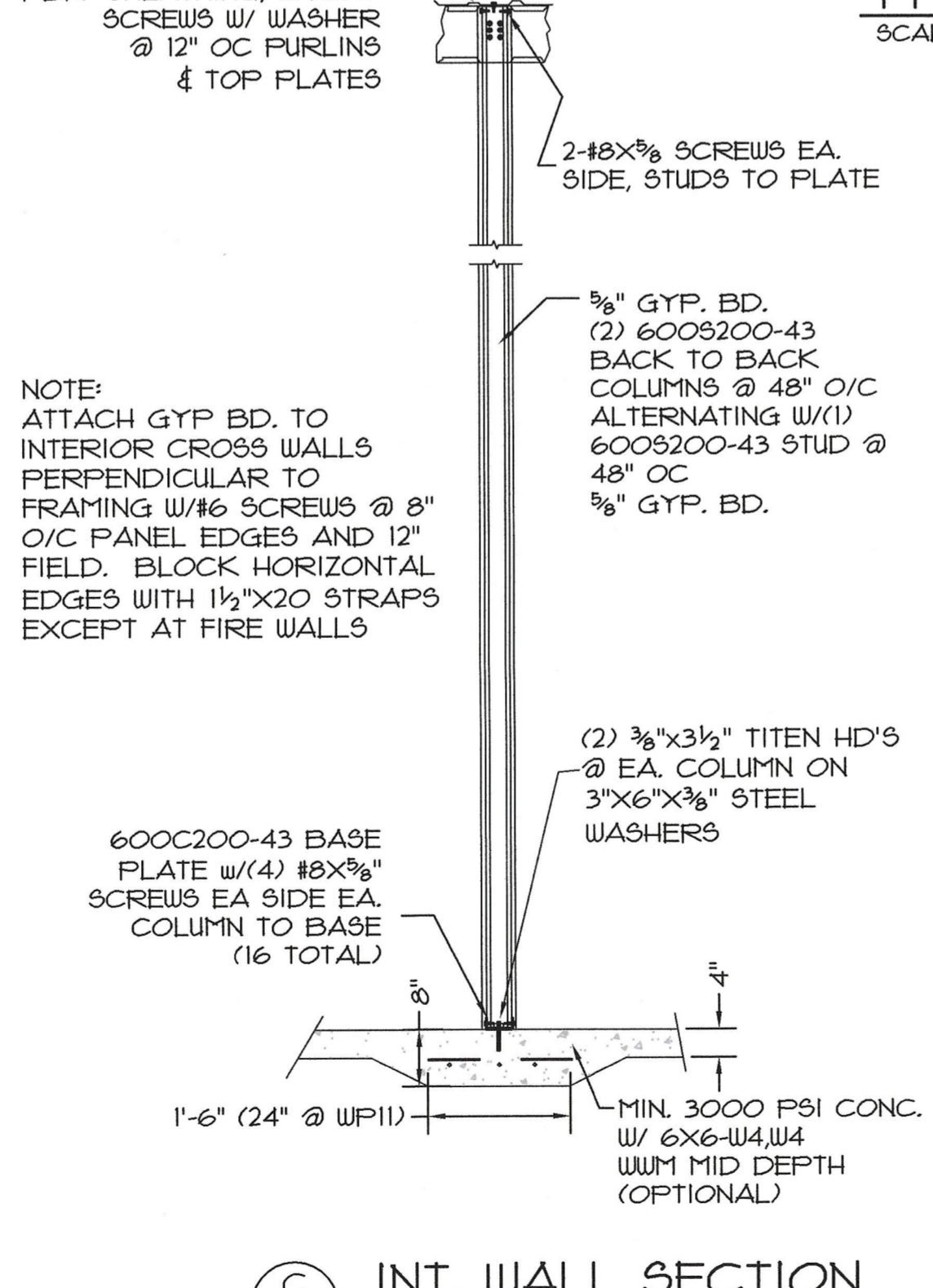
FURLIN LENGTH	STRAPPING POINT
30' & 20'	STRAPPING AT 1/3 POINTS
16', 15' & 12'	MID-SPAN



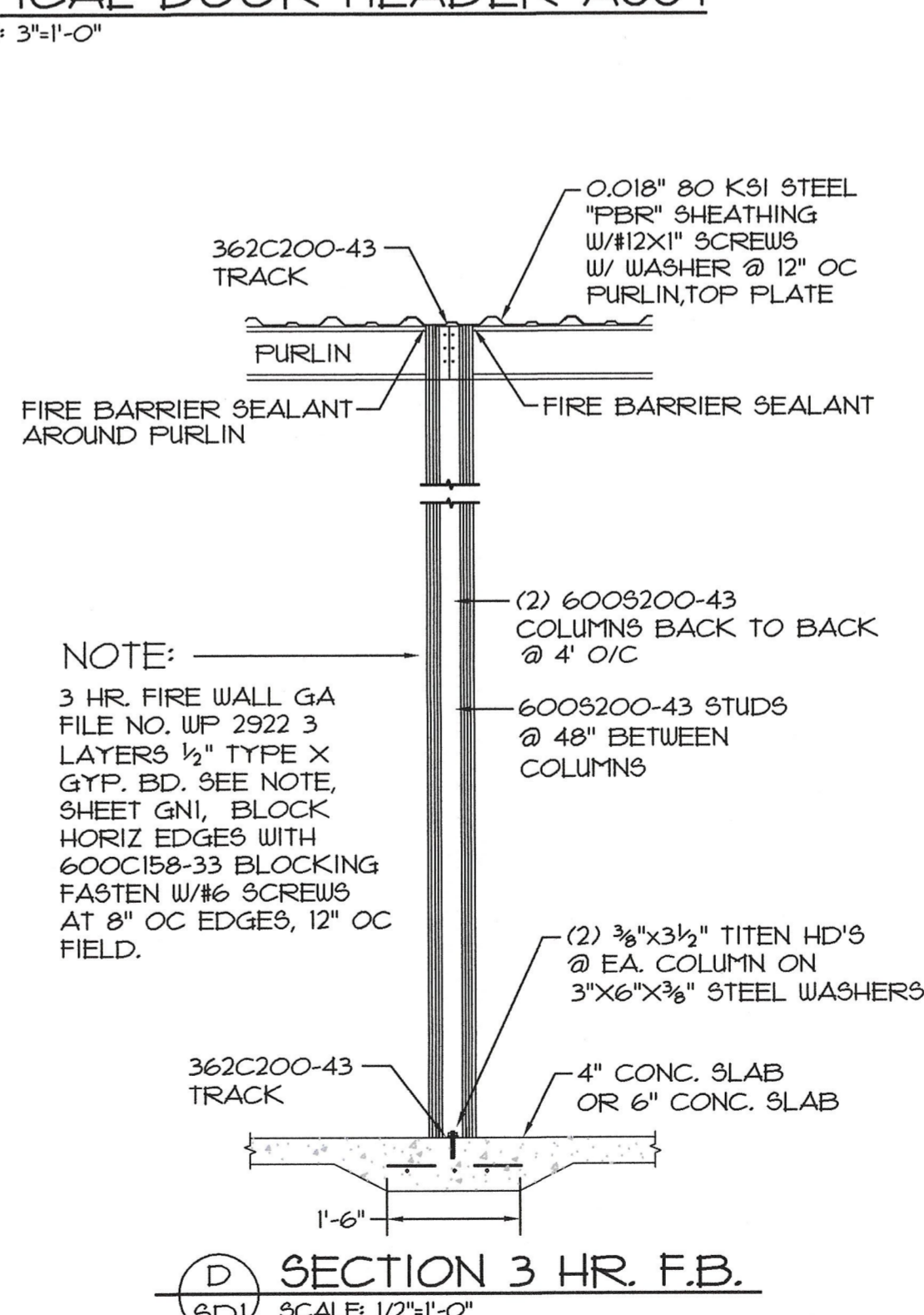
**(A) EXT. LONG. WALL SECTION**  
SCALE: 1/2"-1'-0"  
SD1 WP 2 SEE SHEET A1 FOR SHEAR PANEL LOC'NS



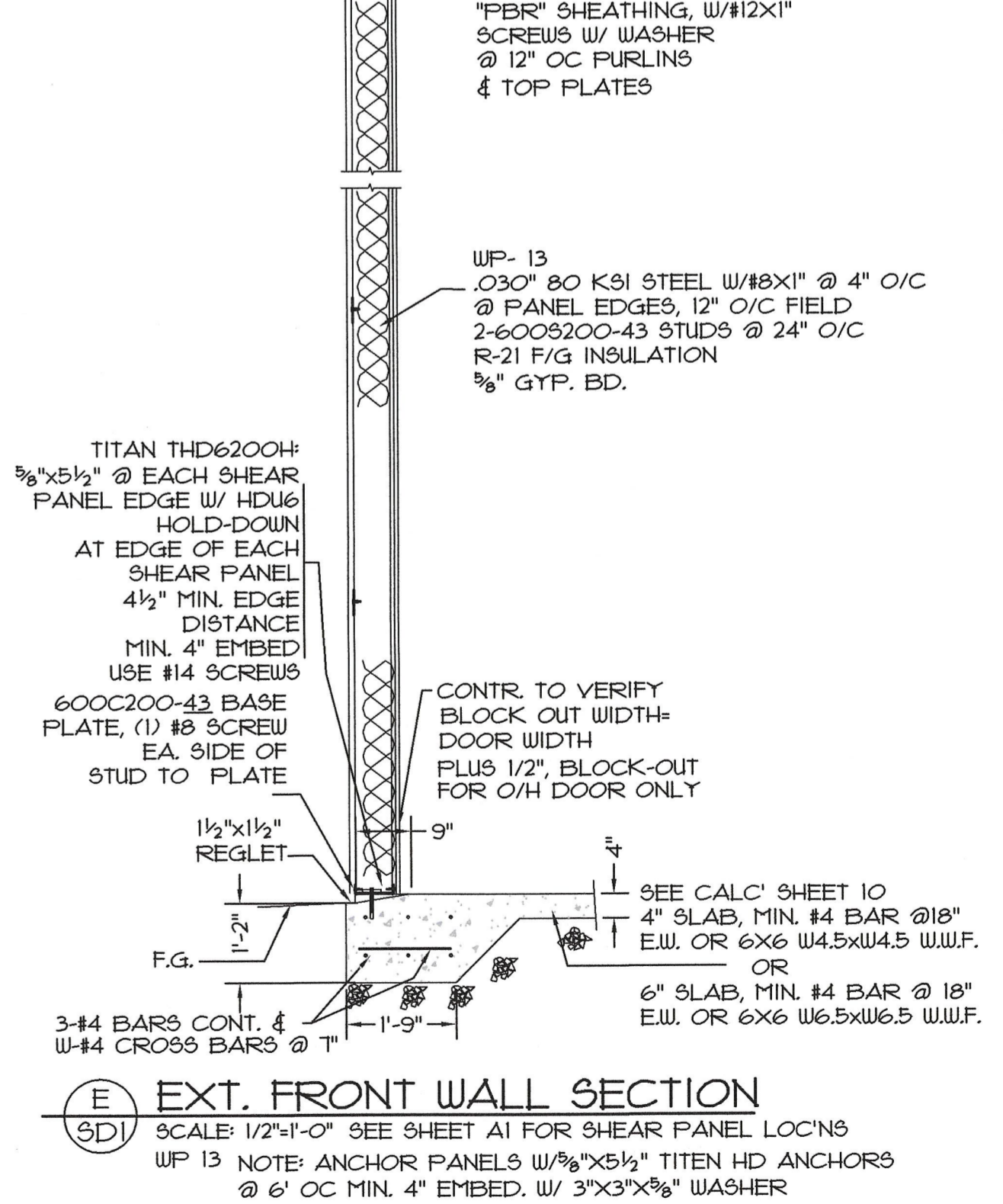
**(B) EXT. END WALL**  
SCALE: 1/2"-1'-0"  
SD1 WP 1, 8 & 10



**(C) INT. WALL SECTION**  
SCALE: 1/2"-1'-0"  
SD1 WP 2,3,4,6,7,11



**(D) SECTION 3 HR. F.B.**  
SCALE: 1/2"-1'-0"  
SD1 GA FILE # WP2922 WP 5



**(E) EXT. FRONT WALL SECTION**  
SCALE: 1/2"-1'-0"  
SD1 WP 13 NOTE: ANCHOR PANELS W/3/8"x5/8" TITEN HD ANCHORS @ 6' OC MIN. 4" EMBED. W/ 3"x3"x3/8" WASHER

REVISIONS:

NO.	DESCRIPTION

**Geomax** INC.  
BUILDING DESIGN  
806 N. NATH STREET, COTTAGE GROVE, OREGON 97024  
TELEPHONE: (503) 942-0216 EMAIL: geomax@geomax.com



PROJECT TITLE: **NEW RENT-A-SHOPS MALK II COTTAGE GROVE, OR**  
SHEET TITLE: **FLOOR & FOUNDATION PLANS**

DATE: 4/4/23  
DESIGNER: R.L.C.  
CHECKED BY: L.R.L.  
FILE NO: W062SD1.DWG  
PROJECT NO: W062  
SHEET NO: SD 1



# RENT-A-SHOPS

LOT 7 COTTAGE GROVE INDUSTRIAL PARK  
COTTAGE GROVE, OR  
TAX LOT: 20-03-32-43: 00500  
ZONING: M-2 HEAVY INDUSTRIAL



## NOTES:

### GENERAL:

1. DO NOT SCALE DRAWINGS, USE DIMENSIONS. VERIFY ALL DIMENSIONS PRIOR TO BEGINNING CONSTRUCTION. CONTRACTOR SHALL NOTIFY ENGINEER WITHIN 24 HOURS OF FINDING ANY DISCREPANCIES BETWEEN PLANS AND EXISTING CONDITIONS.

2. REFERENCES TO "ENGINEER" CONTAINED ON BUILDING PLANS HEREIN REFER TO RODGERS MOUNTAIN CONSULTANTS. BUILDING PLANS REFER TO GEOMAX, INC. THE ENGINEER OF RECORD IS RODGERS MOUNTAIN CONSULTANTS.

### SITE:

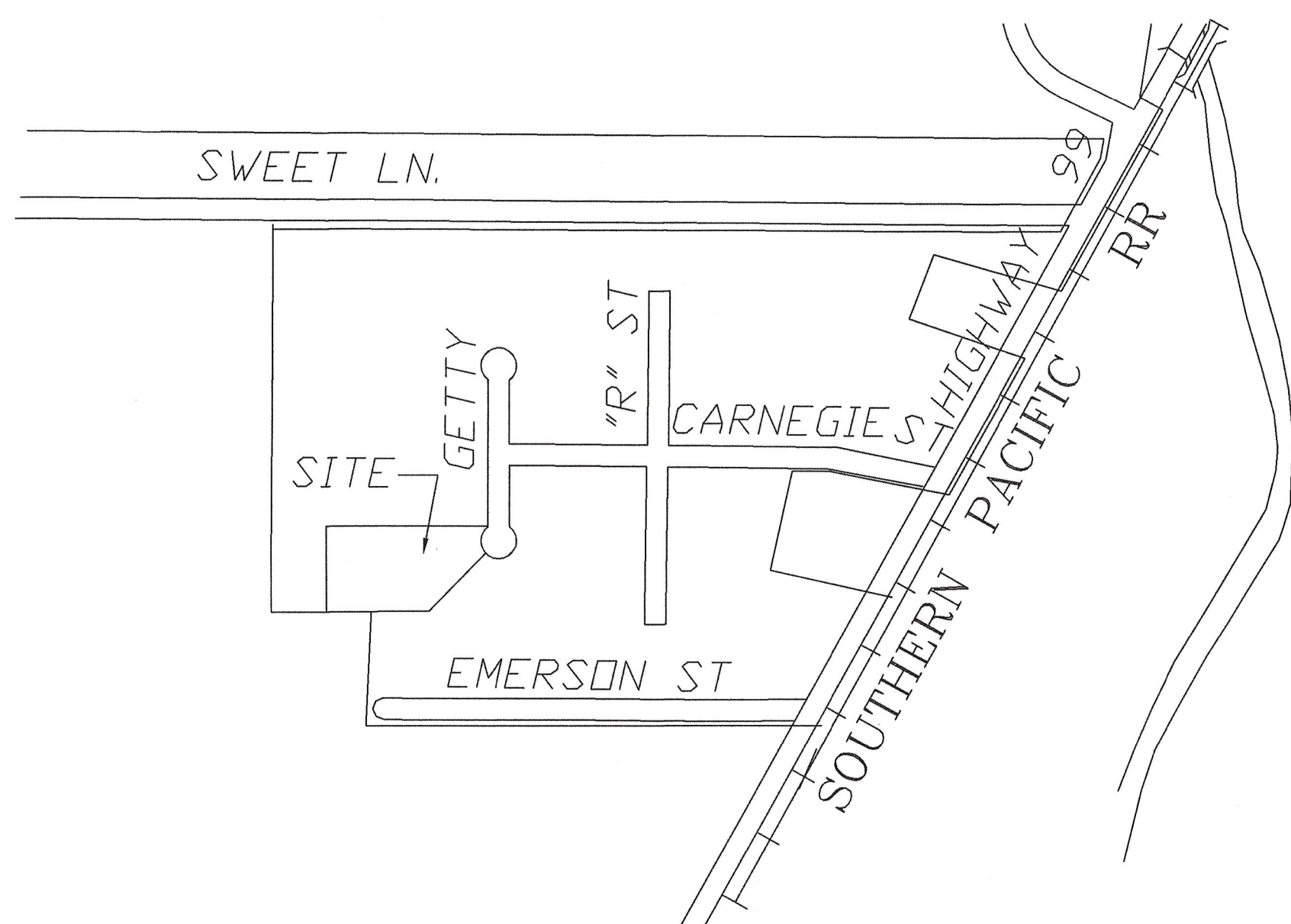
1. ALL CONSTRUCTION AND MATERIALS SHALL CONFORM TO THESE PLANS AND THE LATEST CITY OF SPRINGFIELD-AMENDED OREGON STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION. THE LATEST UNIFORM PLUMBING CODE, THE LATEST OREGON STRUCTURAL SPECIALTY CODE, AND OTHER APPLICABLE STANDARDS.

2. CONTRACTOR SHALL CONFIRM ALL ITEMS OF WORK NOT SHOWN ON THE PLAN AND ALL THOSE NECESSARY FOR SUCCESSFUL, SAFE COMPLETION OF THIS PROJECT AS REQUIRED BY THE CITY OF COTTAGE GROVE, OR.

3. THE CONTRACTOR SHALL NOT PERFORM WORK WITHOUT CITY INSPECTIONS WHERE INSPECTIONS ARE REQUIRED.

4. REQUESTS BY THE CONTRACTOR FOR CHANGES TO THE PLANS MUST BE APPROVED BY THE ENGINEER AND THE OWNER BEFORE ANY CHANGES ARE IMPLEMENTED.

5. ATTENTION: OREGON LAW REQUIRES THE CONTRACTOR TO FOLLOW RULES ADOPTED BY THE OREGON UTILITY NOTIFICATION CENTER. THOSE RULES ARE SET FORTH IN OAR 952-001-0010 THRU OAR 952-001-0090. YOU MAY OBTAIN COPIES OF THE RULES BY CALLING THE CENTER. (NOTE: THE PHONE NUMBER FOR THE OREGON UTILITY NOTIFICATION CENTER IS 503-232-1981 OR 800-332-3244.)



VICINITY MAP  
N.S.

## CODE ANALYSIS

CODES: 2019 OESSC, 2015 CITY OF COTTAGE GROVE DEVELOPMENT CODE

SITE ZONING: M-2

USE: RENTAL SHOP SPACES

2014 OESSC

CHAPTER 3	OCCUPANCY: F-1
CHAPTER 4	ALLOWABLE AREA PER BUILDING: 15500 SQ. FT., 2 STORY ACTUAL AREA: 8 UNITS - 17280 SQ. FT. (AREA SEPARATION REQUIRED)
CHAPTER 6	BUILDING TYPE: TYPE II-B
CHAPTER 6	FIRE RESISTANCE BASED ON SETBACK: LESS THAN 5'; 2 HR. 5' TO 10'; 1 HR., 10' OR GREATER N.R.
CHAPTER 7	ALLOWABLE AREA UNSPRINKLERED: 12000 SQ. FT. NO FIRE ALARM.
CHAPTER 7	FIRE WALL REQUIREMENTS: F-1: 3 HR. @ CENTER OF BUILDING (PENETRATIONS ALLOWED UNDER OESSC T14.3.1 EXCEPTION 2)
CHAPTER 10	OCCUPANT LOAD PER UNIT: (300 SQ. FT. / OCC.) OCCUPANCY OF LARGEST UNIT=1
CHAPTER 10	MEANS OF EGRESS REQ.: 1 AT 1/2" ABOVE DRIVEWAY ELEV.
CHAPTER 11	ACCESSIBILITY: ADA ACCESSIBLE HARDWARE WILL BE INSTALLED @ EACH SPACE.
CHAPTER 11	ADA RESTROOM MECHANICAL: VENT FAN & CADET HEATER.
CHAPTER 16	SEE DESIGN CRITERIA.
CHAPTER 17	SEE STATEMENT OF SPECIAL INSPECTIONS.
CHAPTER 29	RESTROOMS REQUIRED: 1 UNISEX ADA COMPLIANT.
NEC	ELECTRICAL SYSTEM: RESTROOM, GOLF CART ROOM & EXTERIOR LIGHTING DEFERRED SUBMITTAL (DESIGN & COMCHECK BY ELEC. CONTRACTOR)

CODES: 2014 OFC

CHAPTER 5	APPARATUS ACCESS ROAD: HAS BEEN APPROVED BY LOCAL FIRE MARSHAL
CHAPTER 9	FIRE EXTINGUISHERS: 1- TYPE 2-A EXTINGUISHER PER UNIT
CHAPTER 10	EGRESS: PER OESSC
CHAPTER 50	HAZARDOUS MATERIAL: NOT ALLOWED UNDER LEASE AGREEMENT
CHAPTER 56	EXPLOSIVES & FIREWORKS: NOT ALLOWED UNDER LEASE AGREEMENT
CHAPTER 50	HAZARDOUS MATERIAL: NO HAZARDOUS MATERIALS ALLOWED UNDER LEASE

CODES: 2014 OEE5C

CHAPTER 5 SECTION 502.1.3: COMPLIANCE DEMONSTRATED USING COMCHECK

PLUMBING SHALL COMPLY WITH OREGON PLUMBING SPECIALTY CODE  
ELECTRICAL SHALL COMPLY WITH OREGON ELECTRICAL SPECIALTY CODE  
HVAC SHALL COMPLY WITH OREGON MECHANICAL SPECIALTY CODE  
ELECTRICAL SHALL COMPLY WITH OREGON ELECTRICAL SPECIALTY CODE

## STATEMENT OF SPECIAL INSPECTIONS

- I. PERIODIC INSPECTION OF INSTALLATION OF SIMPSON "TITEN HD" RETRO-FIT ANCHORS, ANCHOR BOLTS OR EPOXIED IN PLACE BOLTS.
  - A. ANCHOR TYPE
  - B. ANCHOR DIMENSIONS
  - C. HOLE CLEANING PROCEDURE
  - D. EMBEDMENT DEPTH
  - E. CONCRETE TYPE, COMPRESSIVE STRENGTH & THICKNESS
  - F. HOLE SIZE
  - G. ANCHOR SPACING & EDGE DISTANCE
  - H. INSTALLATION TORQUE
  - I. TYPE OF ADHESIVE & EXPIRATION DATE
  - J. COMPLIANCE WITH MFR. INSTALLATION INSTRUCTIONS

## DESIGN CRITERIA

- A. RISK CATEGORY: II
- B. WIND EXPOSURE: B
- C. BASIC WIND SPEED: 120 (ASCE FIGURE 26.5-1A)
- D. DESIGN SPECTRAL RESPONSE ACCELERATION PARAMETERS:  $sds=0.565g$
- E. BASIC FORCE RESISTING SYSTEMS:  
LIGHT FRAMED (COLD-FORMED STEEL) SHEAR WALLS SHEATHED IN STEEL SHEATHING AND GYPSUM WALLBOARD.
- F. DESIGN BASE SHEARS:  $C_s$  x WEIGHT OF DESIGN AREA  
SEE DESIGN CALCULATIONS
- G. SEISMIC RESPONSE COEFFICIENTS:  $C_s=0.0870$  (STEEL SHEATHING) AND  $C_s=0.2821$  (GWB)
- H. RESPONSE MODIFICATION COEFFICIENT:  $R=6.5$  (STEEL SHEATHING) AND  $R=2$  (GWB)
- I. ANALYSIS PROCEDURE USED: EQUIVALENT LATERAL FORCE PROCEDURE

## DEFERRED SUBMITTALS

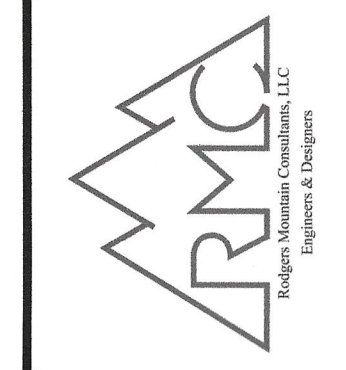
- I. MECHANICAL PLAN BY MECHANICAL CONTRACTOR

## SHEET INDEX

SHEET T1	TITLE PAGE
SHEET CE1	EXISTING CONDITIONS
SHEET CE2	SITE LAYOUT
SHEET CE3	SITE GRADING PLAN
SHEET CE4	UTILITY PLAN
SHEET A1	FLOOR & FOUNDATION PLANS
SHEET A2	ELEVATIONS, REST ROOM DETAILS
SHEET A3	DETAILS AND ELECTRICAL SCHEMATIC
SHEET SD1	STRUCTURAL DETAILS
SHEET GN1	GENERAL CONSTRUCTION NOTES
SHEET L31	LANDSCAPE PLAN
SHEET L32	IRRIGATION PLAN

REVISIONS:

**Geomax** INC.  
BUILDING DESIGN  
806 N. NINTH STREET COTTAGE GROVE, OREGON 97124  
TELEPHONE: (541) 942-0126 FAX: (541) 942-7935



PROJECT TITLE: NEW RENT-A-SHOPS  
MALK II  
COTTAGE GROVE, OR  
SHEET TITLE: TITLE PAGE

DATE	4/3/23
DESIGNER	R.L.C.
CHECKED BY	RMC
FILE NO.	W062T1.DWG
PROJECT NO.	<b>W062</b>
SHEET NO.	<b>T1</b>



**Stormwater Surface Filtration/Infiltration Facility Sizing Spreadsheet**  
**24 Hour Storm, NRCS Type 1A Rainfall Distribution**  
**City of Eugene**

Version 2.1

**Project Information**

Project Name: Malk II Date: 6/6/2024  
 Project Address: Lot 7, Cottage Grove Industrial Park Permit Number:  
Cottage Grove, OR. Catchment ID: Building front & parking  
 Designer: R. Christian  
 Company: Geomax, Inc.

**Instructions:**

1. Complete this form for each drainage catchment in the project site that is to be sized per the Presumptive Approach.
2. Provide a distinctive Catchment ID for each facility coordinated with the site basin map to correlate the appropriate calculations with the facility.
3. The maximum drainage catchment to be modeled per the Presumptive Approach is 1 acre (43,560 SF)
4. For infiltration facilities in Class A or B soils where no infiltration testing has been performed use an infiltration rate of 0.5 in/hr. For all facilities use a maximum soil infiltration rate of 2.5 in/hr for topsoil/growing medium.

**Design Requirements:**

Choose "Yes" from the dropdown boxes below next to the design standards requirements for this facility.

Pollution Reduction (PR)   
 Flow Control (FC)   
 Destination (DT)  \*An infiltration facility must be chosen as the facility type to meet destination requirements

**Site Data-Post Development**

Total Square Footage Impervious Area=  sqft Total Square Footage Pervious Area=  sqft  
 Impervious Area CN=  Pervious Area CN=   
 Total Square Footage of Drainage Area=  sqft Time of Concentration Post Development=  min  
 Weighted Average CN=

**Site Data-Pre Development (Data in this section is only used if Flow Control is required)**

Pre-Development CN=  Time of Concentration Pre-Development=  min

**Soil Data**

Tested Soil Infiltration Rate=  in/hr (See Note 4) Destination Design=  in/hr  
 Design Soil Infiltration Rate=  in/hr Soil Infiltration Rate

**Design Storms Used For Calculations**

Requirement	Rainfall Depth	Design Storm
Pollution Reduction	1.4 inches	Water Quality
Flow Control	3.6 inches	Flood Control
Destination	3.6 inches	Flood Control

**Facility Data**

Facility Type=   
 Surface Width=  ft Facility Surface Area=  sqft  
 Surface Length=  ft Facility Surface Perimeter=  ft  
 Facility Side Slopes=  to 1 Facility Bottom Area=  sqft  
 Max. Ponding Depth in Stormwater Facility=  in Facility Bottom Perimeter=  ft  
 Depth of Growing Medium (Soil)=  in Basin Volume=  cf  
 Ratio of Facility Area to Impervious Area=

**Pollution Reduction-Calculation Results**

Peak Flow Rate to Stormwater Facility = 0.212 cfs  
Total Runoff Volume to Stormwater Facility = 2664 cf  
Max. Depth of Stormwater in Facility = 1.9 in  
Drawdown Time = 0.2 hours

Peak Facility Overflow Rate = 0.000 cfs  
Total Overflow Volume = 0 cf

**Yes** Facility Sizing Meets Pollution Reduction Standards?

**YES** Meets Requirement of No Facility Flooding?

**YES** Meets Requirement for Maximum of 18 Hour Drawdown Time?

**Flow Control-Calculation Results**

Peak Flow Rate to Stormwater Facility = 0.622 cfs  
Total Runoff Volume to Stormwater Facility = 7961 cf  
Max. Depth of Stormwater in Facility = 12.0 in  
Drawdown Time = 3.0 hours

Peak Facility Overflow Rate = 0.251 cfs  
Total Overflow Volume = 1174 cf  
Peak Off-Site Flow Rate  
Filtration Facility Underdrain = 0.076 cfs

Pre-Development Runoff Data

Peak Flow Rate = 0.351 cfs  
Total Runoff Volume = 5151 cf

**Yes** Facility Sizing Meets Flow Control Standards?

**YES** Meets Requirement for Post Development offsite flow less or equal to Pre-Development Flow?

**YES** Meets Requirement for Maximum of 18 Hour Drawdown Time?

**Destination-Calculation Results**

Peak Flow Rate to Stormwater Facility = N/A cfs  
Total Runoff Volume to Stormwater Facility = N/A cf  
Max. Depth of Stormwater in Facility = N/A in  
Drawdown Time = N/A hours

Peak Facility Overflow Rate = N/A cfs  
Total Overflow Volume = N/A cf

**N/A** Facility Sizing Meets Destination Standards?

**N/A** Meets Requirement of No Facility Flooding?

**N/A** Meets Requirement for Maximum of 30 hour Drawdown Time?



**Stormwater Surface Filtration/Infiltration Facility Sizing Spreadsheet**  
**24 Hour Storm, NRCS Type 1A Rainfall Distribution**  
**City of Eugene**

Version 2.1

**Project Information**

Project Name: **Malk II** Date: **6/6/2024**  
 Project Address: **Lot 7, Cottage Grove Industrial Park** Permit Number:  
**Cottage Grove, OR.** Catchment ID: **Rear Building Roof**  
 Designer: **R. Christian**  
 Company: **Geomax, Inc.**

**Instructions:**

1. Complete this form for each drainage catchment in the project site that is to be sized per the Presumptive Approach.
2. Provide a distinctive Catchment ID for each facility coordinated with the site basin map to correlate the appropriate calculations with the facility.
3. The maximum drainage catchment to be modeled per the Presumptive Approach is 1 acre (43,560 SF)
4. For infiltration facilities in Class A or B soils where no infiltration testing has been performed use an infiltration rate of 0.5 in/hr. For all facilities use a maximum soil infiltration rate of 2.5 in/hr for topsoil/growing medium.

**Design Requirements:**

Choose "Yes" from the dropdown boxes below next to the design standards requirements for this facility.

Pollution Reduction (PR) **Yes**  
 Flow Control (FC) **Yes**  
 Destination (DT) **Yes**

\*An infiltration facility must be chosen as the facility type to meet destination requirements

**Site Data-Post Development**

Total Square Footage Impervious Area= **7680** sqft Total Square Footage Pervious Area= **280** sqft  
 Impervious Area CN= **98** Pervious Area CN= **85**  
 Total Square Footage of Drainage Area= **7960** sft Time of Concentration Post Development= **5** min  
 Weighted Average CN= **98**

**Site Data-Pre Development (Data in this section is only used if Flow Control is required)**

Pre-Development CN= **85** Time of Concentration Pre-Development= **10** min

**Soil Data**

Tested Soil Infiltration Rate= **2.5** in/hr (See Note 4) Destination Design= **0.5** in/hr  
 Design Soil Infiltration Rate= **2.5** in/hr Soil Infiltration Rate

**Design Storms Used For Calculations**

Requirement	Rainfall Depth	Design Storm
Pollution Reduction	1.4 inches	Water Quality
Flow Control	3.6 inches	Flood Control
Destination	3.6 inches	Flood Control

**Facility Data**

Facility Type= **Filtration Rain Garden** Facility Surface Area= **960** sqft  
 Surface Width= **4** ft Facility Surface Perimeter= **488** ft  
 Surface Length= **240** ft Facility Bottom Area= **237** sqft  
 Facility Side Slopes= **3** to 1 Facility Bottom Perimeter= **476** ft  
 Max. Ponding Depth in Stormwater Facility= **6** in Basin Volume= **301.5** cf  
 Depth of Growing Medium (Soil)= **12** in Ratio of Facility Area to Impervious Area= **0.121**

**Pollution Reduction-Calculation Results**

Peak Flow Rate to Stormwater Facility = 0.060 cfs  
Total Runoff Volume to Stormwater Facility = 753 cf  
Max. Depth of Stormwater in Facility = 1.9 in  
Drawdown Time = 0.2 hours

Peak Facility Overflow Rate = 0.000 cfs  
Total Overflow Volume = 0 cf

**Yes** Facility Sizing Meets Pollution Reduction Standards?

**YES** Meets Requirement of No Facility Flooding?

**YES** Meets Requirement for Maximum of 18 Hour Drawdown Time?

**Flow Control-Calculation Results**

Peak Flow Rate to Stormwater Facility = 0.170 cfs  
Total Runoff Volume to Stormwater Facility = 2194 cf  
Max. Depth of Stormwater in Facility = 6.0 in  
Drawdown Time = 0.2 hours

Peak Facility Overflow Rate = 0.024 cfs  
Total Overflow Volume = 18 cf  
Peak Off-Site Flow Rate  
Filtration Facility Underdrain = 0.056 cfs

Pre-Development Runoff Data

Peak Flow Rate = 0.095 cfs  
Total Runoff Volume = 1395 cf

**Yes** Facility Sizing Meets Flow Control Standards?

**YES** Meets Requirement for Post Development offsite flow less or equal to Pre-Development Flow?

**YES** Meets Requirement for Maximum of 18 Hour Drawdown Time?

**Destination-Calculation Results**

Peak Flow Rate to Stormwater Facility = N/A cfs  
Total Runoff Volume to Stormwater Facility = N/A cf  
Max. Depth of Stormwater in Facility = N/A in  
Drawdown Time = N/A hours

Peak Facility Overflow Rate = N/A cfs  
Total Overflow Volume = N/A cf

**N/A** Facility Sizing Meets Destination Standards?

**N/A** Meets Requirement of No Facility Flooding?

**N/A** Meets Requirement for Maximum of 30 hour Drawdown Time?





**Stormwater Surface Filtration/Infiltration Facility Sizing Spreadsheet**  
**24 Hour Storm, NRCS Type 1A Rainfall Distribution**  
**City of Eugene**

Version 2.1

**Project Information**

Project Name: Malk II Date: 6/6/2024  
 Project Address: Lot 7, Cottage Grove Industrial Park Permit Number:   
Cottage Grove, OR. Catchment ID: Entrance driveway  
 Designer: R. Christian  
 Company: Geomax, Inc.

**Instructions:**

1. Complete this form for each drainage catchment in the project site that is to be sized per the Presumptive Approach.
2. Provide a distinctive Catchment ID for each facility coordinated with the site basin map to correlate the appropriate calculations with the facility.
3. The maximum drainage catchment to be modeled per the Presumptive Approach is 1 acre (43,560 SF)
4. For infiltration facilities in Class A or B soils where no infiltration testing has been performed use an infiltration rate of 0.5 in/hr. For all facilities use a maximum soil infiltration rate of 2.5 in/hr for topsoil/growing medium.

**Design Requirements:**

Choose "Yes" from the dropdown boxes below next to the design standards requirements for this facility.

Pollution Reduction (PR)   
 Flow Control (FC)   
 Destination (DT)  \*An infiltration facility must be chosen as the facility type to meet destination requirements

**Site Data-Post Development**

Total Square Footage Impervious Area=  sqft Total Square Footage Pervious Area=  sqft  
 Impervious Area CN=  Pervious Area CN=   
 Total Square Footage of Drainage Area=  sqft Time of Concentration Post Development=  min  
 Weighted Average CN=

**Site Data-Pre Development (Data in this section is only used if Flow Control is required)**

Pre-Development CN=  Time of Concentration Pre-Development=  min

**Soil Data**

Tested Soil Infiltration Rate=  in/hr (See Note 4) Destination Design=  in/hr  
 Design Soil Infiltration Rate=  in/hr Soil Infiltration Rate

**Design Storms Used For Calculations**

Requirement	Rainfall Depth	Design Storm
Pollution Reduction	1.4 inches	Water Quality
Flow Control	3.6 inches	Flood Control
Destination	3.6 inches	Flood Control

**Facility Data**

Facility Type=   
 Surface Width=  ft Facility Surface Area=  sqft  
 Surface Length=  ft Facility Surface Perimeter=  ft  
 Facility Side Slopes=  to 1 Facility Bottom Area=  sqft  
 Max. Ponding Depth in Stormwater Facility=  in Facility Bottom Perimeter=  ft  
 Depth of Growing Medium (Soil)=  in Basin Volume=  cf  
 Ratio of Facility Area to Impervious Area=

**Pollution Reduction-Calculation Results**

Peak Flow Rate to Stormwater Facility = 0.002 cfs  
Total Runoff Volume to Stormwater Facility = 25 cf  
Max. Depth of Stormwater in Facility = 0.3 in  
Drawdown Time = 0.2 hours

Peak Facility Overflow Rate = 0.000 cfs  
Total Overflow Volume = 0 cf

**Yes** Facility Sizing Meets Pollution Reduction Standards?

- YES** Meets Requirement of No Facility Flooding?
- YES** Meets Requirement for Maximum of 18 Hour Drawdown Time?

**Flow Control-Calculation Results**

Peak Flow Rate to Stormwater Facility = 0.006 cfs  
Total Runoff Volume to Stormwater Facility = 72 cf  
Max. Depth of Stormwater in Facility = 4.3 in  
Drawdown Time = 0.2 hours

Peak Facility Overflow Rate = 0.000 cfs  
Total Overflow Volume = 0 cf  
Peak Off-Site Flow Rate Filtration Facility Underdrain = N/A cfs

Pre-Development Runoff Data

Peak Flow Rate = 0.003 cfs  
Total Runoff Volume = 45 cf

**Yes** Facility Sizing Meets Flow Control Standards?

- YES** Meets Requirement for Post Development offsite flow less or equal to Pre-Development Flow?
- YES** Meets Requirement for Maximum of 18 Hour Drawdown Time?

**Destination-Calculation Results**

Peak Flow Rate to Stormwater Facility = 0.006 cfs  
Total Runoff Volume to Stormwater Facility = 72 cf  
Max. Depth of Stormwater in Facility = 11.0 in  
Drawdown Time = 6.8 hours

Peak Facility Overflow Rate = 0.000 cfs  
Total Overflow Volume = 0 cf

**Yes** Facility Sizing Meets Destination Standards?

- YES** Meets Requirement of No Facility Flooding?
- YES** Meets Requirement for Maximum of 30 hour Drawdown Time?

GEOMAX, INC.  
 806 N. Ninth St.  
 Cottage Grove, OR 97424  
 541.942.0126

6/6/2024

**STORM RUNOFF**

**Malk II**

**Lot 7 Cottage Grove Industrial Park**

**T.L. 20-03-32-43-00600**

**Cottage Grove, OR**

Based on Drainage Areas

**Area 1 Front of building & parking**

Gross Drainage Area	s.f.	<input type="text" value="19180"/>	19180	
Drainage area	acres	calc	0.44	
Time of Concentration	min.	<input type="text" value="10"/>	10	
5 yr, 15 min. Storm	in./hr.	<input type="text" value="1.5"/>	1.5	
Percent of impervious area	%	<input type="text" value="100"/>	1	
Runoff Coefficient	c	<input type="text" value="0.95"/>	0.95	Commercial
<b>Runoff</b>	Q=cfs	calc	0.62744	

**Area 2 rear of building**

Gross Drainage Area	s.f.	<input type="text" value="7680"/>	7680	
Drainage area	acres	calc	0.18	
Time of Concentration	min.	<input type="text" value="10"/>	10	
5 yr, 15 min. Storm	in./hr.	<input type="text" value="1.5"/>	1.5	
Percent of impervious area	%	<input type="text" value="100"/>	1	
Runoff Coefficient	c	<input type="text" value="0.95"/>	0.95	Commercial
<b>Runoff</b>	Q=cfs	calc	0.25124	

## Pipe Flow Table

Type of Pipe           PVC  
Mannings n            0.011  
Given S (ft/ft)        0.0150

Pipe Size (in.)	V (fps)	Q (cfs)
2	1.993877098	0.0435
3	2.612718123	0.12825
4	3.165082603	0.27621
6	4.147431496	0.81435
8	5.024255453	1.7538
10	5.830132002	3.17984
12	6.58363712	5.17078
15	7.639634135	9.37524
18	8.627005163	15.2452
24	10.45087249	32.8324

## Pipe Flow Table

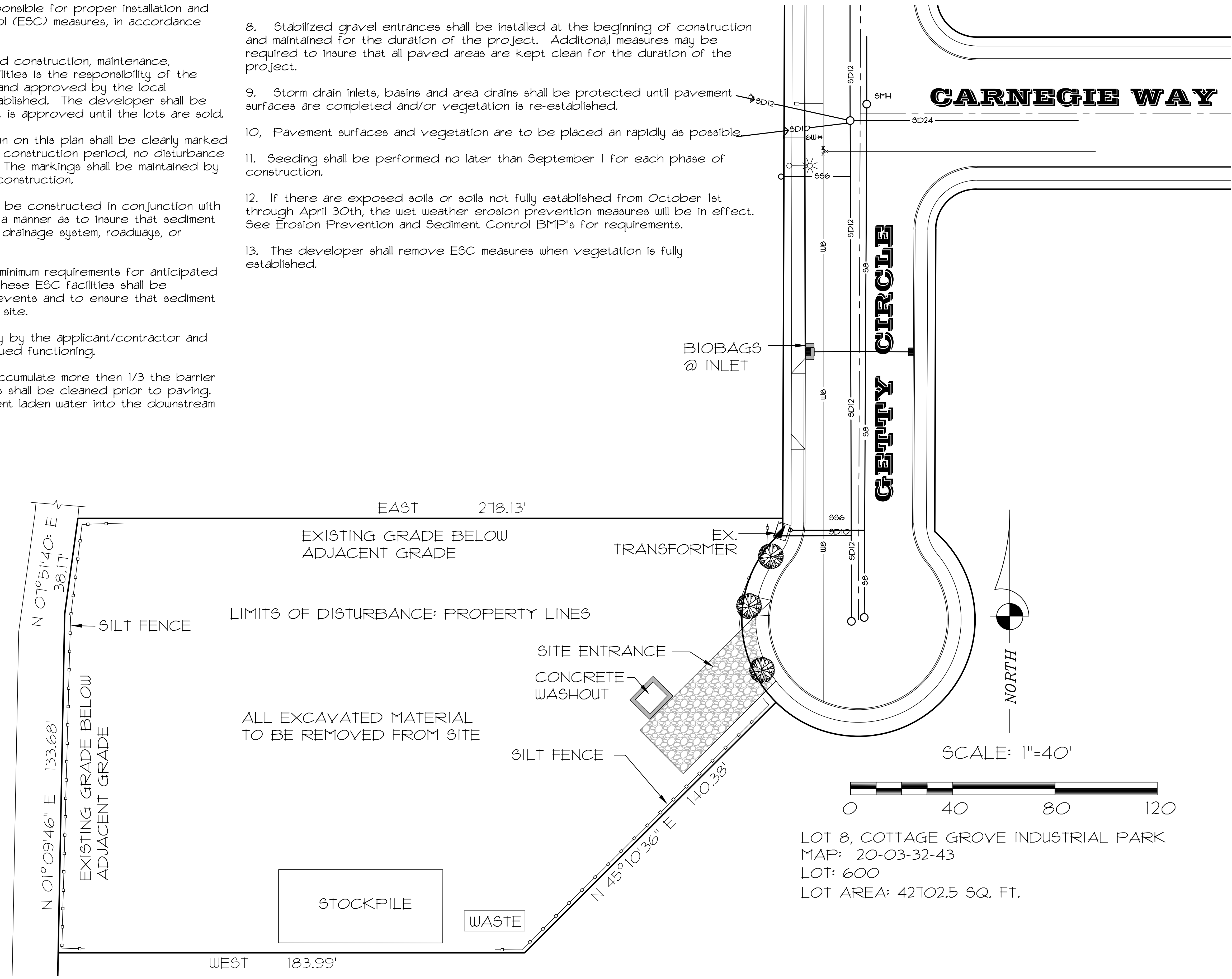
Type of Pipe	PVC
Mannings n	0.011
Given S (ft/ft)	0.0100

Pipe Size (in.)	V (fps)	Q (cfs)
2	1.627993833	0.03552
3	2.133275414	0.10472
4	2.584279123	0.22552
6	3.386363636	0.66491
8	4.102287399	1.43197
10	4.760282846	2.59633
12	5.375517199	4.22192
15	6.237735151	7.65485
18	7.043920219	12.4476
24	8.533101656	26.8075

# EROSION CONTROL NOTES

1. Owner or designated person shall be responsible for proper installation and maintenance of all erosion and sediment control (ESC) measures, in accordance with local, State and Federal regulation.
2. The implementation of these ESC plans and construction, maintenance, replacement and upgrading of these ESC facilities is the responsibility of the contractor until all construction is completed and approved by the local jurisdiction and vegetation/landscaping is established. The developer shall be responsible for maintenance after the project is approved until the lots are sold.
3. The boundaries of the clearing limits shown on this plan shall be clearly marked in the field prior to construction. During the construction period, no disturbance beyond the clearing limits shall be permitted. The markings shall be maintained by the applicant/contractor for the duration of construction.
4. The ESC facilities shown on this plan must be constructed in conjunction with all clearing and grading activities, and in such a manner as to insure that sediment and sediment laden water does not enter the drainage system, roadways, or violate applicable water standards.
5. The ESC facilities shown on this plan are minimum requirements for anticipated site conditions. During construction period, these ESC facilities shall be upgraded as needed for unexpected storm events and to ensure that sediment and sediment laden water does not leave the site.
6. The ESC facilities shall be inspected daily by the applicant/contractor and maintained as necessary to ensure their continued functioning.
7. At no time shall sediment be allowed to accumulate more than 1/3 the barrier height. All catch basins and conveyance lines shall be cleaned prior to paving. The cleaning operations shall not flush sediment laden water into the downstream system.

8. Stabilized gravel entrances shall be installed at the beginning of construction and maintained for the duration of the project. Additional measures may be required to insure that all paved areas are kept clean for the duration of the project.
9. Storm drain inlets, basins and area drains shall be protected until pavement surfaces are completed and/or vegetation is re-established.
10. Pavement surfaces and vegetation are to be placed as rapidly as possible.
11. Seeding shall be performed no later than September 1 for each phase of construction.
12. If there are exposed soils or soils not fully established from October 1st through April 30th, the wet weather erosion prevention measures will be in effect. See Erosion Prevention and Sediment Control BMP's for requirements.
13. The developer shall remove ESC measures when vegetation is fully established.



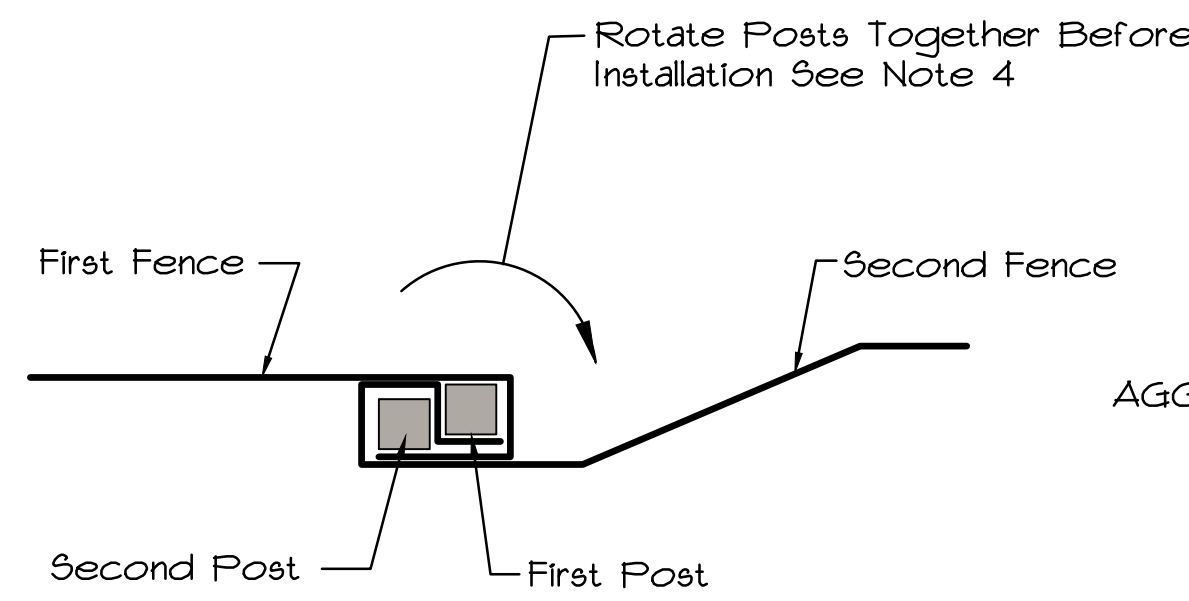
NO.	DATE	DESCRIPTION

**Geomax** INC.  
 BUILDING DESIGN  
 806 N NINTH STREET, COTTAGE GROVE, OREGON 97124  
 TELEPHONE: (503) 342-0126 EMAIL: geomax@geomax.com

PROJECT TITLE: **NEW RENTAL SHOPS  
 MALK II  
 COTTAGE GROVE, OR**

SHEET TITLE: **EROSION & SEDIMENT CONTROL PLAN**

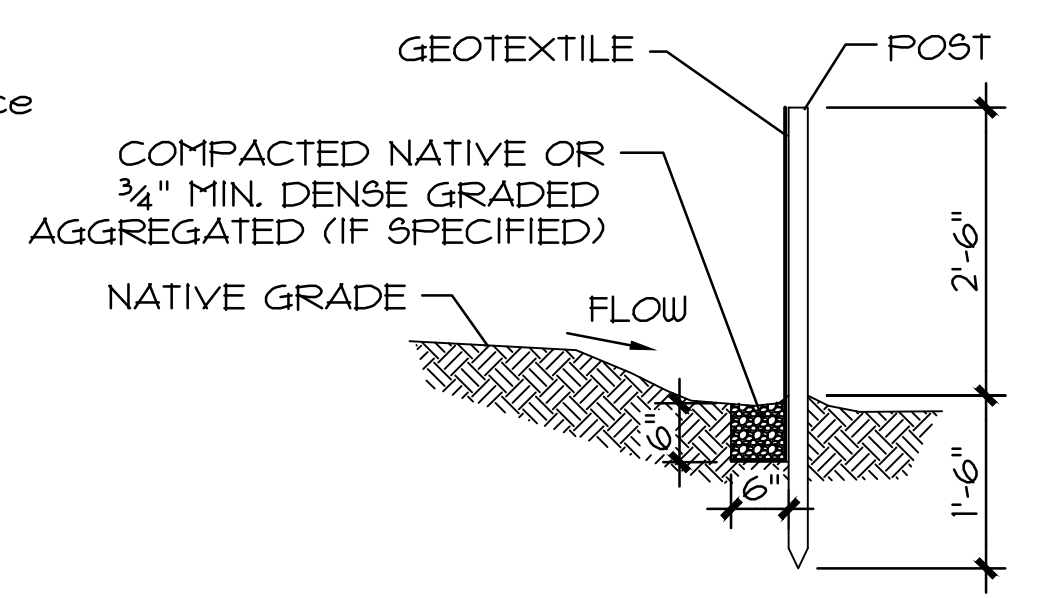
DATE: 5/25/22  
 DESIGNER: R.L.C.  
 CHECKED BY: R.L.C.  
 FILE NO.: W062ESCP.DWG  
 PROJECT NO.: **W062**  
 SHEET NO.: **EP 1**



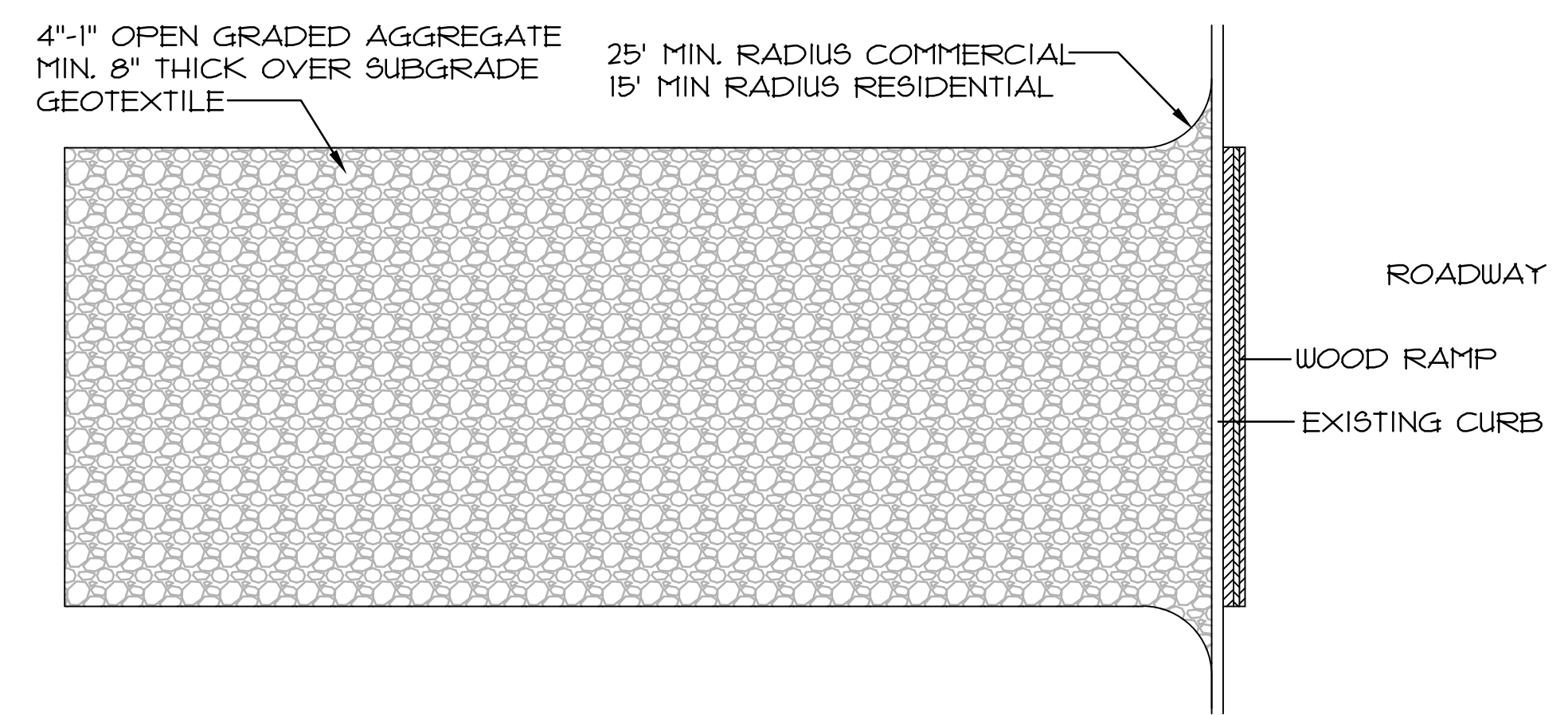
**SPlice DETAIL**

**NOTES:**

1. USE 2"x2" WOOD FENCE POSTS
2. POSTS TO BE INSTALLED ON DOWNHILL SIDE OF SEDIMENT FENCE. POSITION POSTS TO PREVENT SEPARATION FROM GEOTEXTILE
3. COMPACT FILTER FABRIC TRENCH BACKFILL AND SOIL ON UPHILL SIDE OF FENCE.
4. LOCATE FENCE NO CLOSER THAN THREE FEET TO THE TOE OF SLOPE.
5. WHEN SPLICES ARE NECESSARY MAKE SPLICE AT POST ACCORDING TO SPLICE DETAIL. PLACE THE END POST OF THE SECOND FENCE INSIDE THE END POST OF THE FIRST FENCE. ROTATE BOTH POSTS TOGETHER AT LEAST 180° TO CREATE A TIGHT SEAL WITH THE FABRIC MATERIAL.

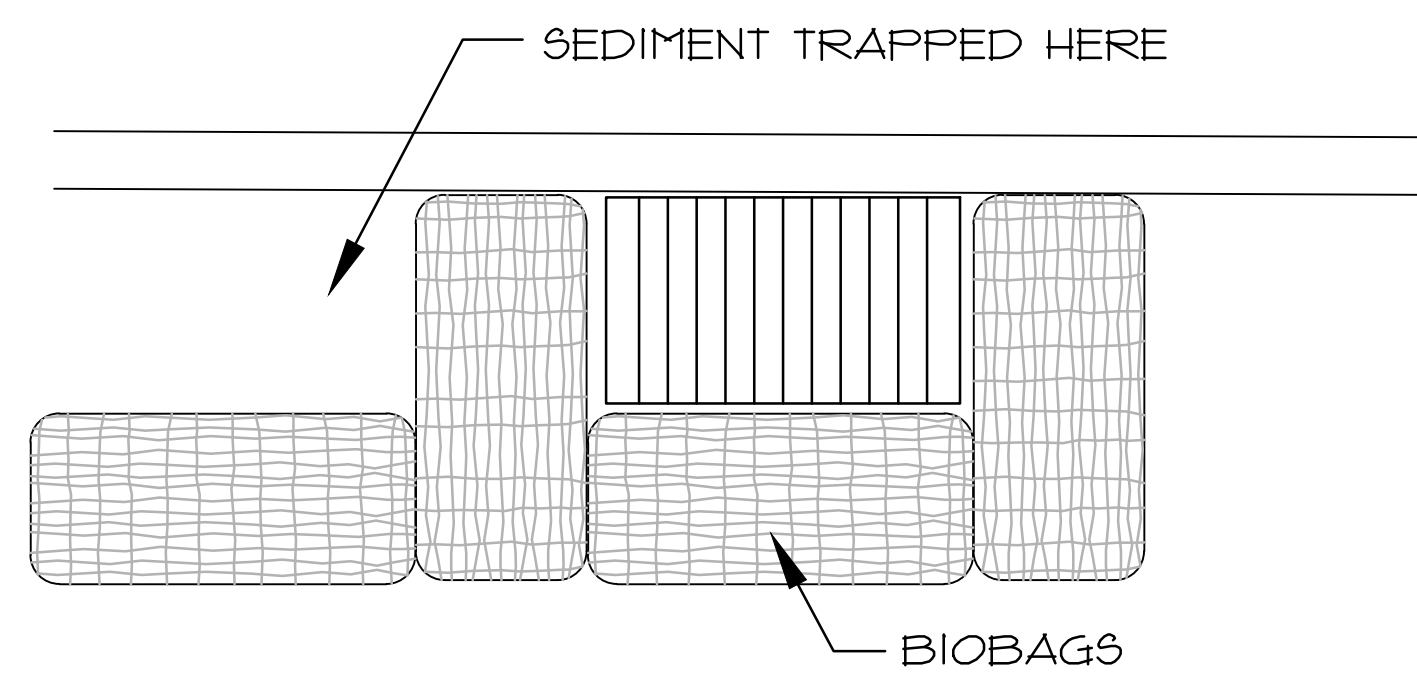


**SEDIMENT FENCE DETAIL**

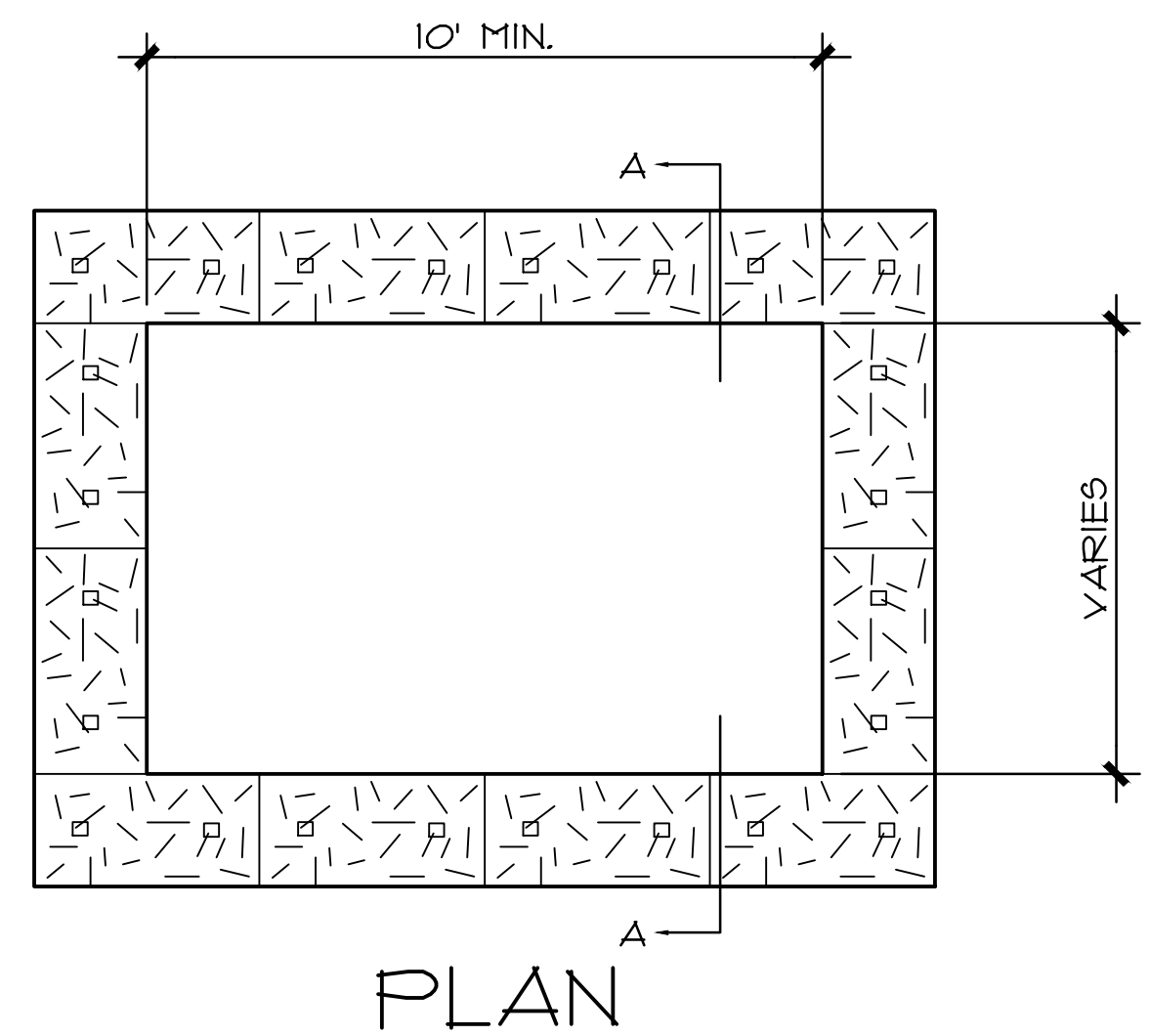


**CONSTRUCTION ENTRANCE**

CONSTRUCTION ENTRANCE TABLE MINIMUM LENGTH	
LENGTH (FT)	AREA OF EXPOSED SOIL (AC)
20	0.25
50	0.25 < A < 1.0
100	A > 1.0

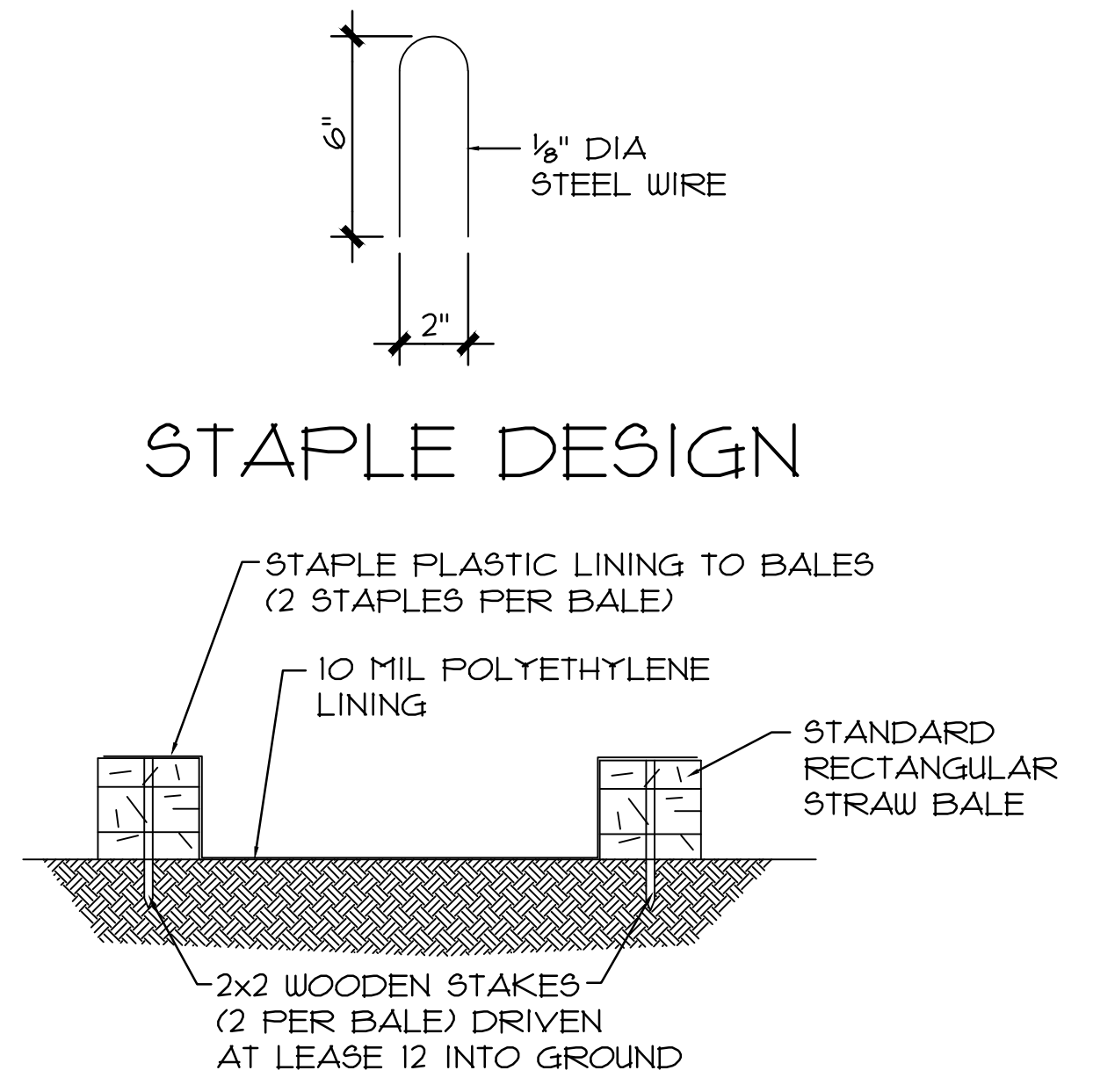


**CATCH BASIN/CURB INLET**



**CONCRETE WASH OUT**

NOTE: VINYL WASHOUT PIT WITH FILTER BAG IS ACCEPTABLE ALTERNATE



**STAPLE DESIGN**

**SECTION A-A**

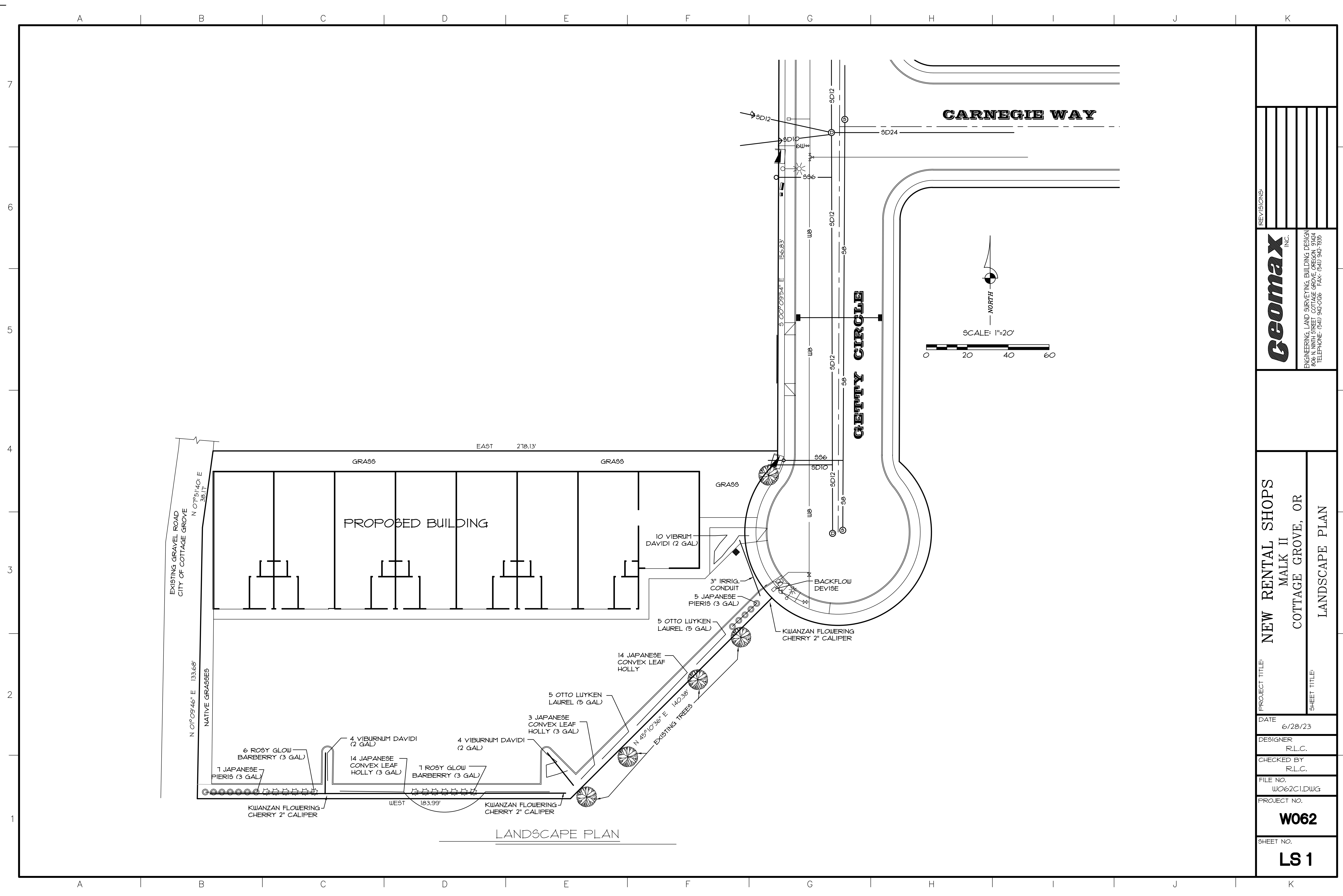
REVISIONS:


**Geomax** INC.  
 BUILDING DESIGN  
 806 N NINTH STREET, COTTAGE GROVE, OREGON 97124  
 TELEPHONE: (503) 942-0126 EMAIL: geomax@geomax.com

PROJECT TITLE: **NEW RENTAL SHOPS  
 MALK II  
 COTTAGE GROVE, OR**  
 SHEET TITLE: **EROSION & SEDIMENT CONTROL PLAN**

DATE: 5/10/22  
 DESIGNER: R.L.C.  
 CHECKED BY: R.L.C.  
 FILE NO.: W062ESCP.DWG  
 PROJECT NO.: **W062**

SHEET NO.: **EP 2**

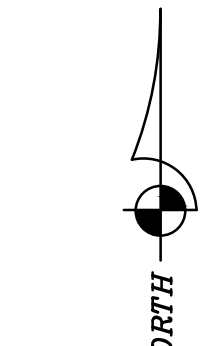


**CARNEGIE WAY**

**CHERRY CIRCLE**

PROPOSED BUILDING

LANDSCAPE PLAN



SCALE: 1"=20'



EXISTING GRAVEL ROAD  
CITY OF COTTAGE GROVE  
N 0°15'14" E 156.83'  
N 0°15'14" E 331'  
N 0°09'46" E 133.68'  
NATIVE GRASSES

GRASS EAST 218.13'

GRASS

GRASS

10 VIBURNUM DAVIDI (2 GAL)

3" IRRIG. CONDUIT

5 JAPANESE PIERIS (3 GAL)

5 OTTO LUYKEN LAUREL (5 GAL)

BACKFLOW DEVICE

KWANZAN FLOWERING CHERRY 2" CALIPER

14 JAPANESE CONVEX LEAF HOLLY

5 OTTO LUYKEN LAUREL (5 GAL)

3 JAPANESE CONVEX LEAF HOLLY (3 GAL)

14 JAPANESE CONVEX LEAF HOLLY

N 45°10'36" E 140.38'

EXISTING TREES

6 ROSY GLOW BARBERRY (3 GAL)

1 JAPANESE PIERIS (3 GAL)

4 VIBURNUM DAVIDI (2 GAL)

14 JAPANESE CONVEX LEAF HOLLY (3 GAL)

1 ROSY GLOW BARBERRY (3 GAL)

4 VIBURNUM DAVIDI (2 GAL)

WEST 183.99'

KWANZAN FLOWERING CHERRY 2" CALIPER

REVISIONS:


**Geomax** INC.  
ENGINEERING, LAND SURVEYING, BUILDING DESIGN  
806 N NINTH STREET, COTTAGE GROVE, OREGON 97024  
TELEPHONE: (541) 942-0706 FAX: (541) 942-1995

PROJECT TITLE:  
**NEW RENTAL SHOPS  
MALK II  
COTTAGE GROVE, OR**

SHEET TITLE:  
**LANDSCAPE PLAN**

DATE  
6/28/23

DESIGNER  
R.L.C.

CHECKED BY  
R.L.C.

FILE NO.  
W062C1.DWG

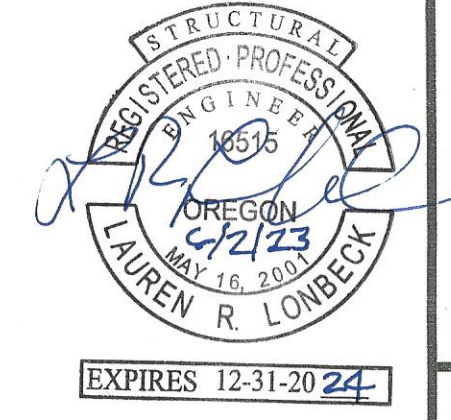
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**W062**

SHEET NO.  
**LS 1**



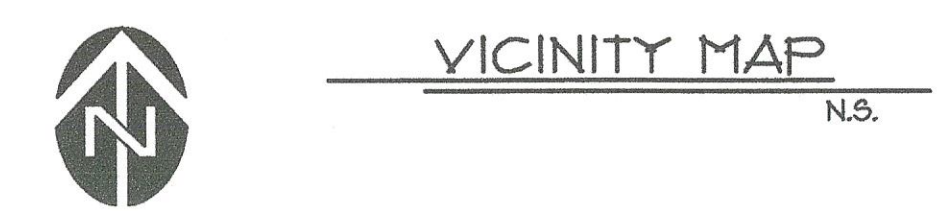
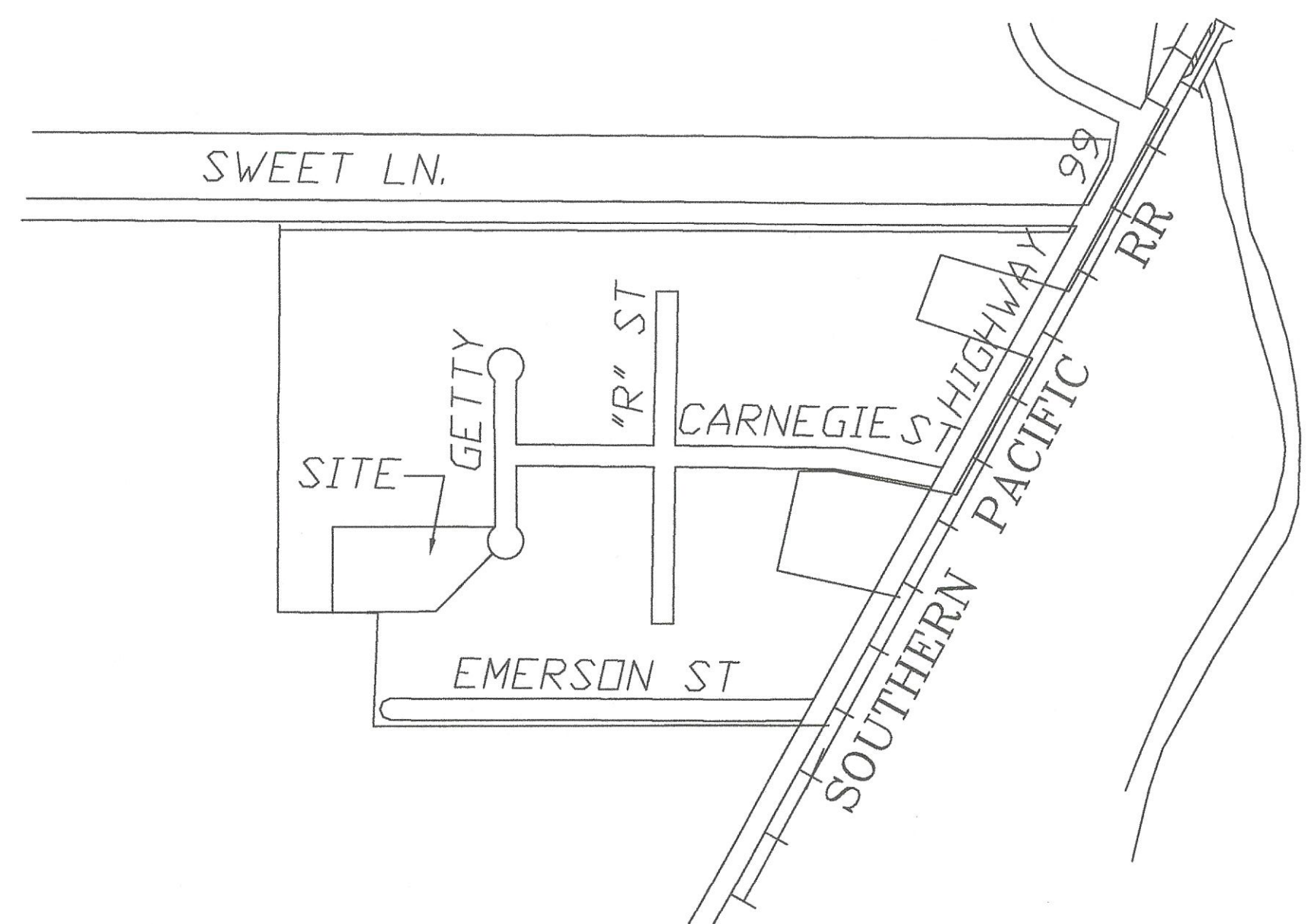
# RENT-A-SHOPS

LOT 7 COTTAGE GROVE INDUSTRIAL PARK  
COTTAGE GROVE, OR  
TAX LOT: 20-03-32-43: 00500  
ZONING: M-2 HEAVY INDUSTRIAL



## NOTES:

- GENERAL:**
- DO NOT SCALE DRAWINGS, USE DIMENSIONS. VERIFY ALL DIMENSIONS PRIOR TO BEGINNING CONSTRUCTION. CONTRACTOR SHALL NOTIFY ENGINEER WITHIN 24 HOURS OF FINDING ANY DISCREPANCIES BETWEEN PLANS AND EXISTING CONDITIONS.
  - REFERENCES TO "ENGINEER" CONTAINED ON BUILDING PLANS HEREIN REFER TO RODGERS MOUNTAIN CONSULTANTS. BUILDING PLANS REFER TO GEOMAX, INC. THE ENGINEER OF RECORD IS RODGERS MOUNTAIN CONSULTANTS
- SITE:**
- ALL CONSTRUCTION AND MATERIALS SHALL CONFORM TO THESE PLANS AND THE LATEST CITY OF SPRINGFIELD-AMENDED OREGON STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, THE LATEST UNIFORM PLUMBING CODE, THE LATEST OREGON STRUCTURAL SPECIALTY CODE, AND OTHER APPLICABLE STANDARDS.
  - CONTRACTOR SHALL CONFIRM ALL ITEMS OF WORK NOT SHOWN ON THE PLAN AND ALL THOSE NECESSARY FOR SUCCESSFUL, SAFE COMPLETION OF THIS PROJECT AS REQUIRED BY THE CITY OF COTTAGE GROVE, OR.
  - THE CONTRACTOR SHALL NOT PERFORM WORK WITHOUT CITY INSPECTIONS WHERE INSPECTIONS ARE REQUIRED.
  - REQUESTS BY THE CONTRACTOR FOR CHANGES TO THE PLANS MUST BE APPROVED BY THE ENGINEER AND THE OWNER BEFORE ANY CHANGES ARE IMPLEMENTED.
  - ATTENTION: OREGON LAW REQUIRES THE CONTRACTOR TO FOLLOW RULES ADOPTED BY THE OREGON UTILITY NOTIFICATION CENTER. THOSE RULES ARE SET FORTH IN OAR 952-001-0010 THRU OAR 952-001-0090. YOU MAY OBTAIN COPIES OF THE RULES BY CALLING THE CENTER. (NOTE: THE PHONE NUMBER FOR THE OREGON UTILITY NOTIFICATION CENTER IS 503-232-1981 OR 800-332-3244.)



## CODE ANALYSIS

CODES: 2019 OSBC, 2015 CITY OF COTTAGE GROVE DEVELOPMENT CODE  
SITE ZONING: M-2  
USE: RENTAL SHOP SPACES  
2014 OSBC

CHAPTER 3 OCCUPANCY: F-1  
CHAPTER 4 ALLOWABLE AREA PER BUILDING: 15500 SQ. FT., 2 STORY  
ACTUAL AREA: 8 UNITS - 11280 SQ. FT. (AREA SEPARATION REQUIRED)  
CHAPTER 6 BUILDING TYPE: TYPE II-B  
CHAPTER 6 FIRE RESISTANCE BASED ON SETBACK: LESS THAN 5': 2 HR.  
5' TO 10': 1 HR., 10' OR GREATER N.R.  
CHAPTER 7 ALLOWABLE AREA UNSPRINKLERED: 12000 SQ. FT. NO FIRE ALARM.  
CHAPTER 7 FIRE WALL REQUIREMENTS: F-1: 3 HR. @ CENTER OF BUILDING  
(PENETRATIONS ALLOWED UNDER OSBC 114.3.1 EXCEPTION 2)  
CHAPTER 10 OCCUPANT LOAD PER UNIT: (300 SQ. FT. / OCC.) OCCUPANCY OF LARGEST UNIT=1  
CHAPTER 10 MEANS OF EGRESS REQ: 1 AT 1/2" ABOVE DRIVEWAY ELEV.  
CHAPTER 11 ACCESSIBILITY: ADA ACCESSIBLE HARDWARE WILL BE INSTALLED @ EACH SPACE.  
CHAPTER 11 ADA RESTROOM MECHANICAL: VENT FAN & CADET HEATER.  
CHAPTER 16 SEE DESIGN CRITERIA.  
CHAPTER 17 SEE STATEMENT OF SPECIAL INSPECTIONS.  
CHAPTER 29 RESTROOMS REQUIRED: 1 UNISEX ADA COMPLIANT.  
NEC ELECTRICAL SYSTEM: RESTROOM, GOLF CART ROOM & EXTERIOR LIGHTING  
DEFERRED SUBMITTAL (DESIGN & COMCHECK BY ELEC. CONTRACTOR)

CODES: 2014 OFC  
CHAPTER 5 APPARATUS ACCESS ROADS: HAS BEEN APPROVED BY LOCAL FIRE MARSHAL  
CHAPTER 9 FIRE EXTINGUISHERS: 1- TYPE 2-A EXTINGUISHER PER UNIT  
CHAPTER 10 EGRESS: PER OSBC  
CHAPTER 50 HAZARDOUS MATERIAL: NOT ALLOWED UNDER LEASE AGREEMENT  
CHAPTER 56 EXPLOSIVES & FIREWORKS: NOT ALLOWED UNDER LEASE AGREEMENT  
CHAPTER 50 HAZARDOUS MATERIAL: NO HAZARDOUS MATERIALS ALLOWED UNDER LEASE

CODES: 2014 OEEBC  
CHAPTER 5 SECTION 502.1.3: COMPLIANCE DEMONSTRATED USING COMCHECK

PLUMBING SHALL COMPLY WITH OREGON PLUMBING SPECIALTY CODE  
ELECTRICAL SHALL COMPLY WITH OREGON ELECTRICAL SPECIALTY CODE  
HVAC SHALL COMPLY WITH OREGON MECHANICAL SPECIALTY CODE  
ELECTRICAL SHALL COMPLY WITH OREGON ELECTRICAL SPECIALTY CODE

## STATEMENT OF SPECIAL INSPECTIONS

- PERIODIC INSPECTION OF INSTALLATION OF SIMPSON "TITEN HD" RETRO-FIT ANCHORS, ANCHOR BOLTS OR EPOXIED IN PLACE BOLTS.
  - ANCHOR TYPE
  - ANCHOR DIMENSIONS
  - HOLE CLEANING PROCEDURE
  - EMBEDMENT DEPTH
  - CONCRETE TYPE, COMPRESSIVE STRENGTH & THICKNESS
  - HOLE SIZE
  - ANCHOR SPACING & EDGE DISTANCE
  - INSTALLATION TORQUE
  - TYPE OF ADHESIVE & EXPIRATION DATE
  - COMPLIANCE WITH MFR. INSTALLATION INSTRUCTIONS

## DESIGN CRITERIA

- RISK CATEGORY: II
- WIND EXPOSURE: B
- BASIC WIND SPEED: 120 (ASCE FIGURE 26.5-1A)
- DESIGN SPECTRAL RESPONSE ACCELERATION PARAMETERS:  $S_{ds}=0.565g$
- BASIC FORCE RESISTING SYSTEM: LIGHT FRAMED (COLD-FORMED STEEL) SHEAR WALLS SHEATHED IN STEEL SHEATHING AND GYPSUM WALLBOARD.
- DESIGN BASE SHEARS:  $C_s$  x WEIGHT OF DESIGN AREA  
SEE DESIGN CALCULATIONS
- SEISMIC RESPONSE COEFFICIENTS:  $C_s=0.0810$  (STEEL SHEATHING) AND  $C_s=0.2821$  (GWB)
- RESPONSE MODIFICATION COEFFICIENT:  $R=6.5$  (STEEL SHEATHING) AND  $R=2$  (GWB)
- ANALYSIS PROCEDURE USED: EQUIVALENT LATERAL FORCE PROCEDURE

## DEFERRED SUBMITTALS

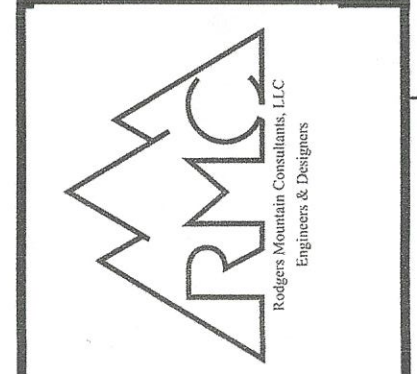
- MECHANICAL PLAN BY MECHANICAL CONTRACTOR

## SHEET INDEX

SHEET T1	TITLE PAGE
SHEET CE1	EXISTING CONDITIONS
SHEET CE2	SITE LAYOUT
SHEET CE3	SITE GRADING PLAN
SHEET CE4	UTILITY PLAN
SHEET A1	FLOOR & FOUNDATION PLANS
SHEET A2	ELEVATIONS, REST ROOM DETAILS
SHEET A3	DETAILS AND ELECTRICAL SCHEMATIC
SHEET SD1	STRUCTURAL DETAILS
SHEET GN1	GENERAL CONSTRUCTION NOTES
SHEET L31	LANDSCAPE PLAN
SHEET L32	IRRIGATION PLAN

REVISIONS:


**Geomax** INC.  
BUILDING DESIGN  
806 N. NINTH STREET, COTTAGE GROVE, OREGON 97024  
TELEPHONE: (541) 942-0126 FAX: (541) 942-1935



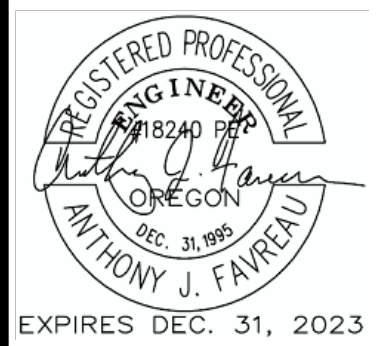
PROJECT TITLE: **NEW RENT-A-SHOPS**  
W.A. STEVENS CONSTRUCTION  
COTTAGE GROVE, OR

SHEET TITLE: **TITLE PAGE**

DATE: 4/3/23  
DESIGNER: R.L.C.  
CHECKED BY: RMC  
FILE NO.: W062T1.DWG  
PROJECT NO.: **W062**  
SHEET NO.: **T1**







REVISIONS:	

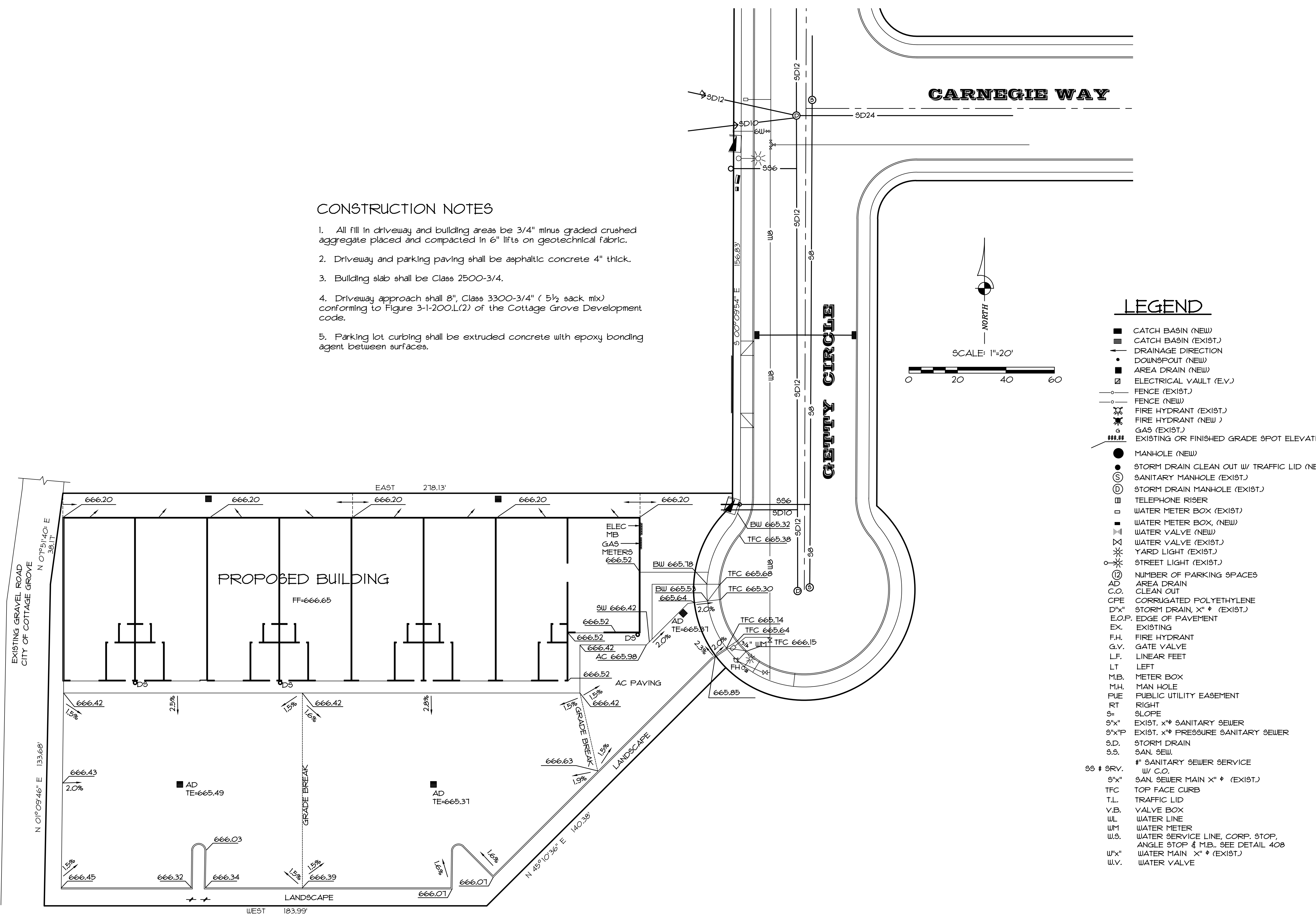
**Geomax** INC.  
 ENGINEERING, LAND SURVEYING, BUILDING DESIGN  
 806 N. NINTH STREET, COTTAGE GROVE, OREGON 97024  
 TELEPHONE: (541) 942-0706 FAX: (541) 942-1995

**THE FAVREAU GROUP**

PROJECT TITLE:  
**NEW RENTAL SHOPS  
 W.A. STEVENS CONSTRUCTION  
 COTTAGE GROVE, OR**

SHEET TITLE:  
**GRADING PLAN**

DATE: 5/10/22  
 DESIGNER: R.L.C.  
 CHECKED BY: A.J.F.  
 FILE NO.: WO62C1.DWG  
 PROJECT NO.:  
**W062**  
 SHEET NO.:  
**CE 3**



**CONSTRUCTION NOTES**

1. All fill in driveway and building areas be 3/4" minus graded crushed aggregate placed and compacted in 6" lifts on geotechnical fabric.
2. Driveway and parking paving shall be asphaltic concrete 4" thick.
3. Building slab shall be Class 2500-3/4.
4. Driveway approach shall be 8", Class 3300-3/4" ( 5 1/2 sack mix) conforming to Figure 3-1-200.L(2) of the Cottage Grove Development code.
5. Parking lot curbing shall be extruded concrete with epoxy bonding agent between surfaces.

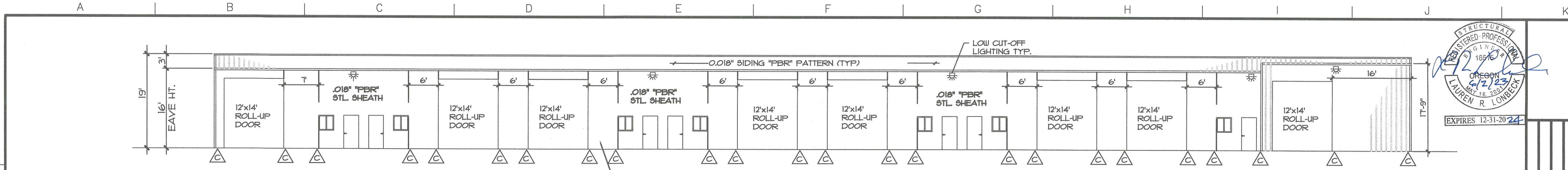
**LEGEND**

- CATCH BASIN (NEW)
- CATCH BASIN (EXIST.)
- DRAINAGE DIRECTION
- DOWNSPOUT (NEW)
- AREA DRAIN (NEW)
- ELECTRICAL VAULT (E.V.)
- FENCE (EXIST.)
- FENCE (NEW)
- ⊕ FIRE HYDRANT (EXIST.)
- ⊕ FIRE HYDRANT (NEW)
- ⊕ GAS (EXIST.)
- ### EXISTING OR FINISHED GRADE SPOT ELEVATION
- MANHOLE (NEW)
- STORM DRAIN CLEAN OUT W/ TRAFFIC LID (NEW)
- ⊙ SANITARY MANHOLE (EXIST.)
- ⊙ STORM DRAIN MANHOLE (EXIST.)
- TELEPHONE RISER
- WATER METER BOX (EXIST.)
- WATER METER BOX (NEW)
- WATER VALVE (NEW)
- WATER VALVE (EXIST.)
- ⊕ YARD LIGHT (EXIST.)
- ⊕ STREET LIGHT (EXIST.)
- ⊙ NUMBER OF PARKING SPACES
- AD AREA DRAIN CLEAN OUT
- C.P.E. CORRUGATED POLYETHYLENE
- D"x" STORM DRAIN, X" ⊕ (EXIST.)
- E.O.P. EDGE OF PAVEMENT
- EX. EXISTING
- F.H. FIRE HYDRANT
- G.V. GATE VALVE
- LF. LINEAR FEET
- LT. LEFT
- M.B. METER BOX
- M.H. MAN HOLE
- P.U.E. PUBLIC UTILITY EASEMENT
- RT. RIGHT
- S. SLOPE
- S"x" EXIST. X" ⊕ SANITARY SEWER
- S"x"P EXIST. X" ⊕ PRESSURE SANITARY SEWER
- S.D. STORM DRAIN
- S.S. SAN. SEW.
- S" SANITARY SEWER SERVICE W/ C.O.
- S"x" SAN. SEWER MAIN X" ⊕ (EXIST.)
- T.F.C. TOP FACE CURB
- T.L. TRAFFIC LID
- V.B. VALVE BOX
- WL. WATER LINE
- WM. WATER METER
- W.S. WATER SERVICE LINE, CORP. STOP, ANGLE STOP & M.B. SEE DETAIL 408
- W"x" WATER MAIN X" ⊕ (EXIST.)
- W.V. WATER VALVE

**GRADING PLAN**





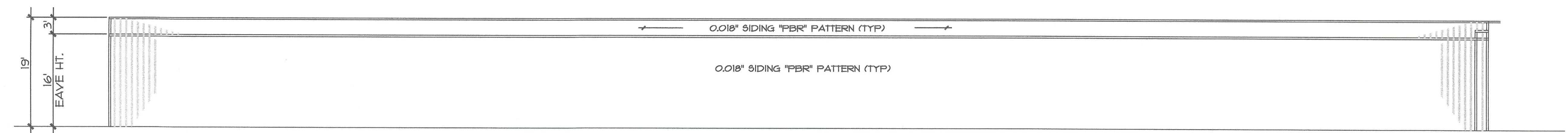
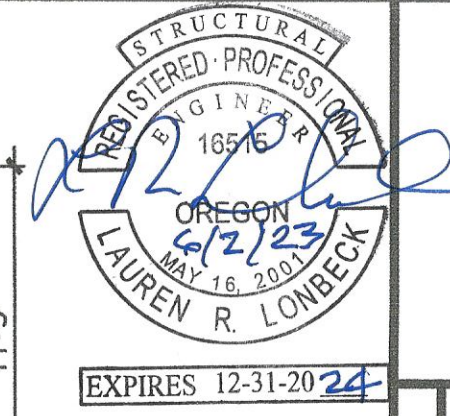


△ SIMPSON 3/4"X1/2" (TYP.)  
HOLD-DOWNS W/ 2 EA 1/2"X1 1/2" BOLTS  
W/ WASHERS AT NUT AND HEAD.  
ATTACH TO 20 GA STUDS. ANCHOR  
W/ 3/8"X5 1/2" TITEN HD'S. MAXIMIZE SPAN  
BETWEEN 3/4"X1/2" (TYP.) AT EACH  
PANEL

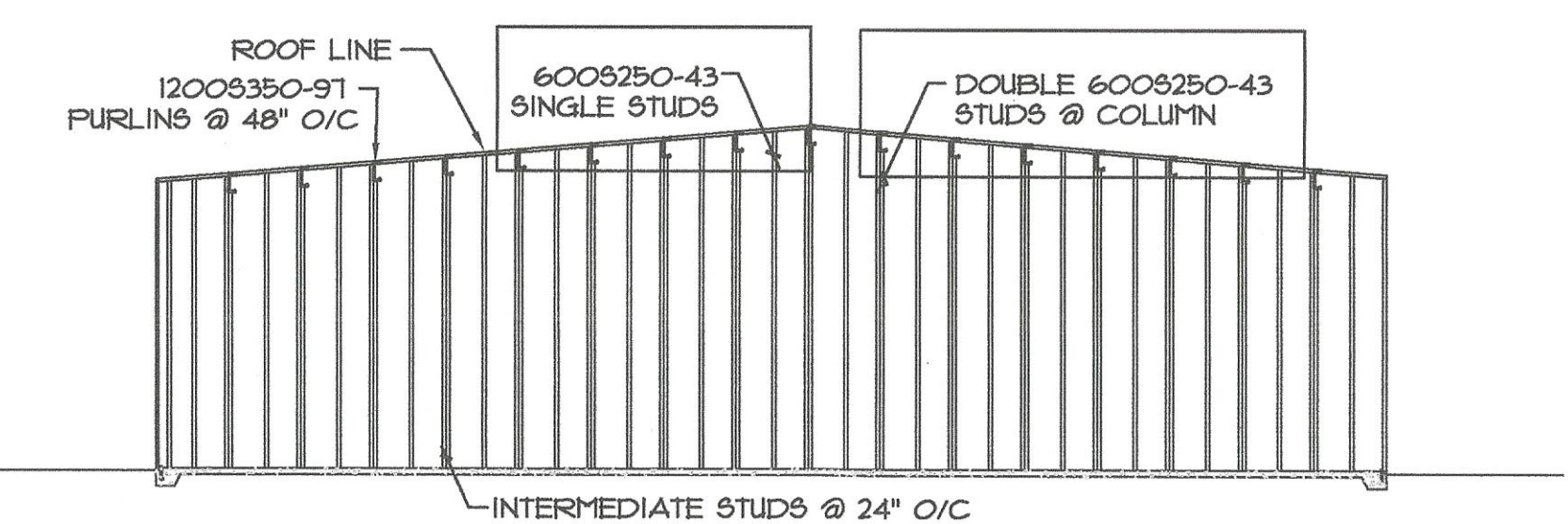
- NOTES:
1. SHEAR PANEL SIDING (.02") IS ATTACHED TO STUDS W/ #8 SCREWS @ 4" OC @ PANEL EDGES & 12" OC FIELD
  2. ALL OTHER SIDING IS 0.018 STEEL SHEATHING WITH #8 SCREWS @ 6" OC PANEL EDGES, 12" OC FIELD.
  3. ROOFING IS 0.018 STEEL SHEATHING WITH #12/14 SCREWS SPACED AS CALLED ON FRAMING NOTE #4, SHEET GNI.
  4. INTERMEDIATE WALL ANCHORS ARE 3/8"X1 1/2" TITEN HD'S SET AT 60" OC AND W/ IN 10" OF PLATE ENDS.

**FRONT ELEVATION**  
WITH LATERAL LOAD RESISTING ELEMENTS  
1"=10'

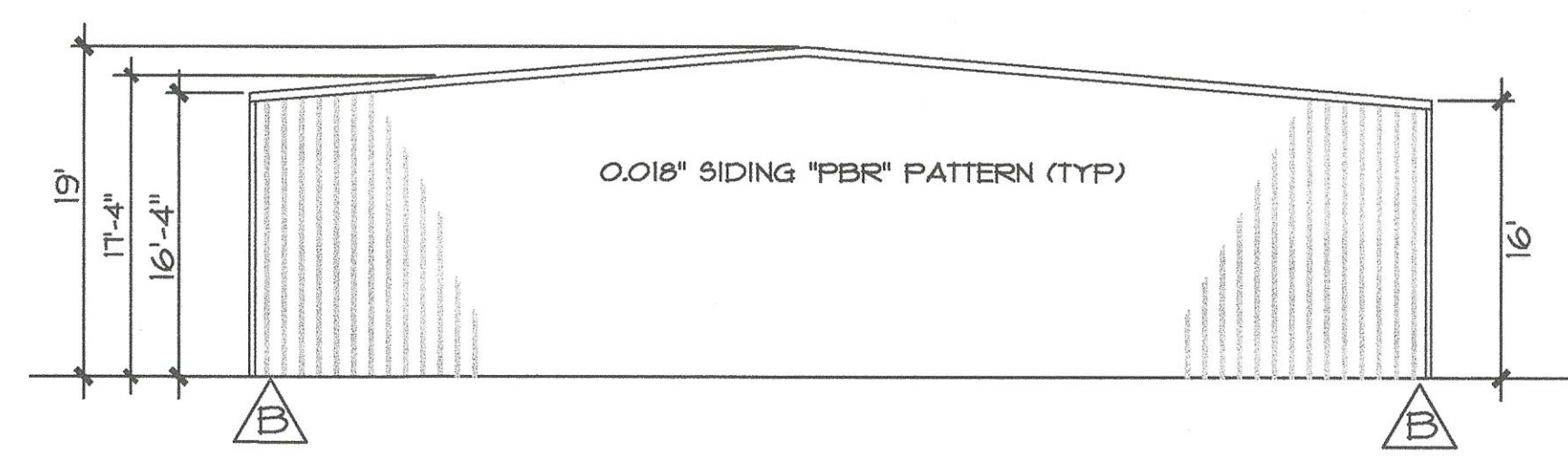
NOTE: ALL DOOR HARDWARE SHALL BE ADA COMPLIANT. RESTROOMS SHALL HAVE LEVER LOCKS W/ VISUAL INDICATOR



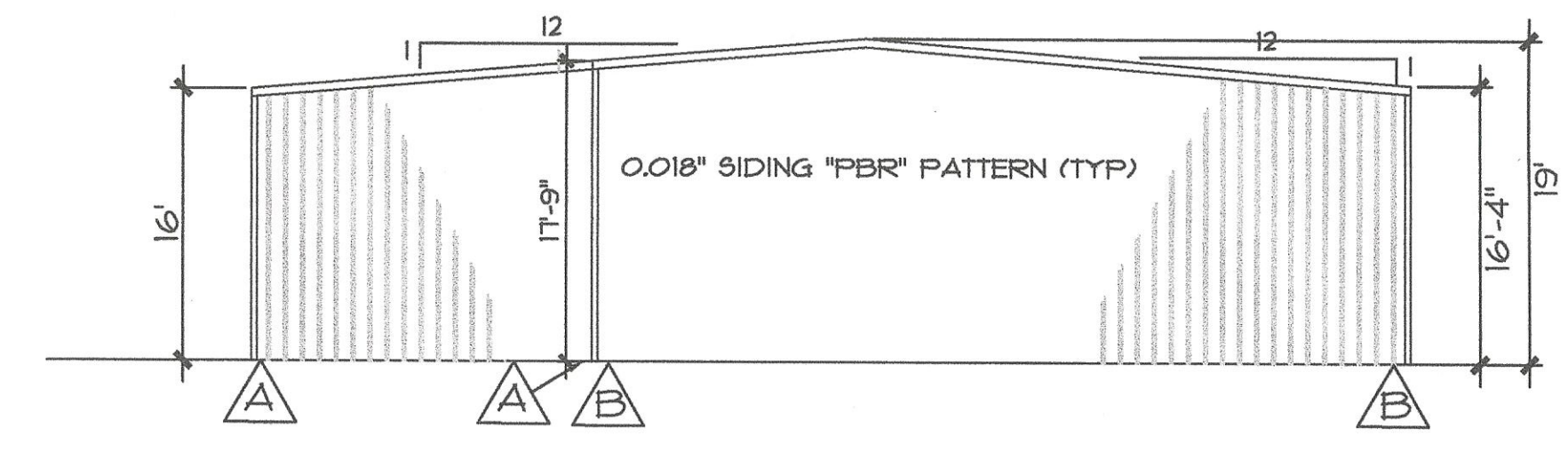
**REAR ELEVATION**  
1"=10'



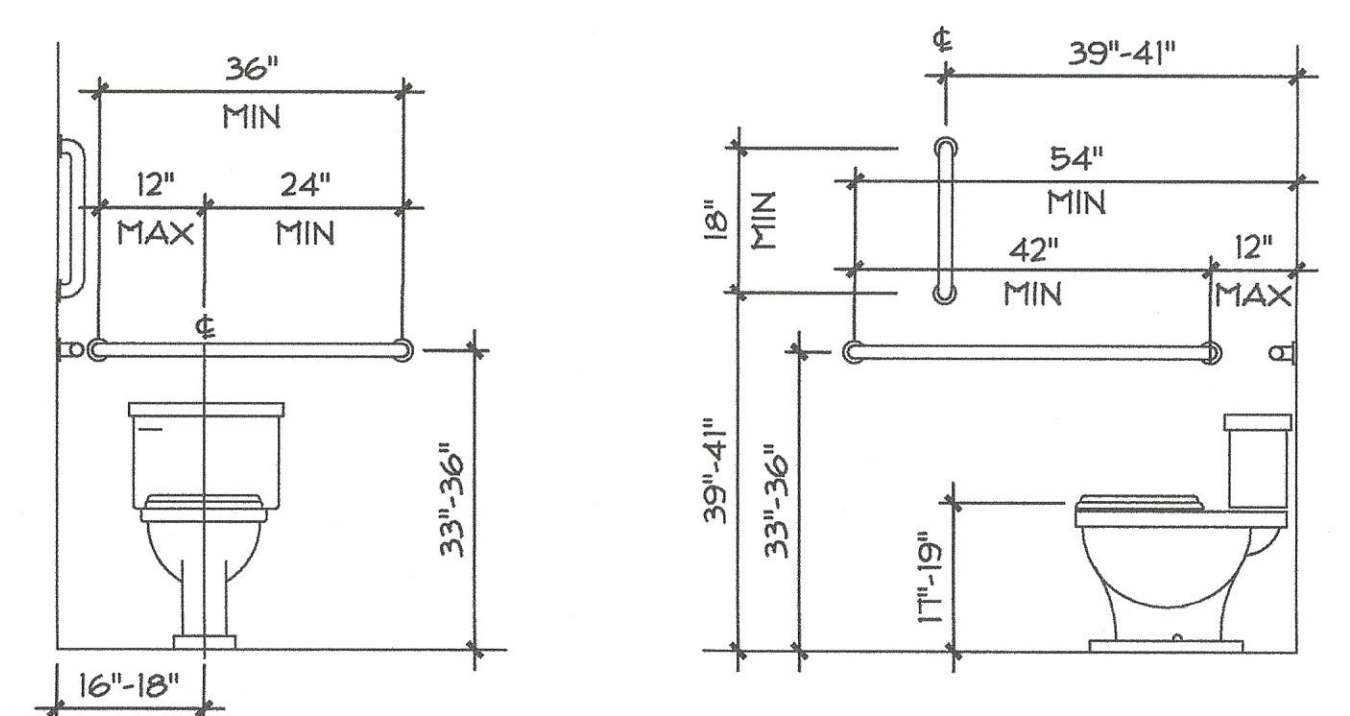
**TYPICAL SECTION**  
1"=10'



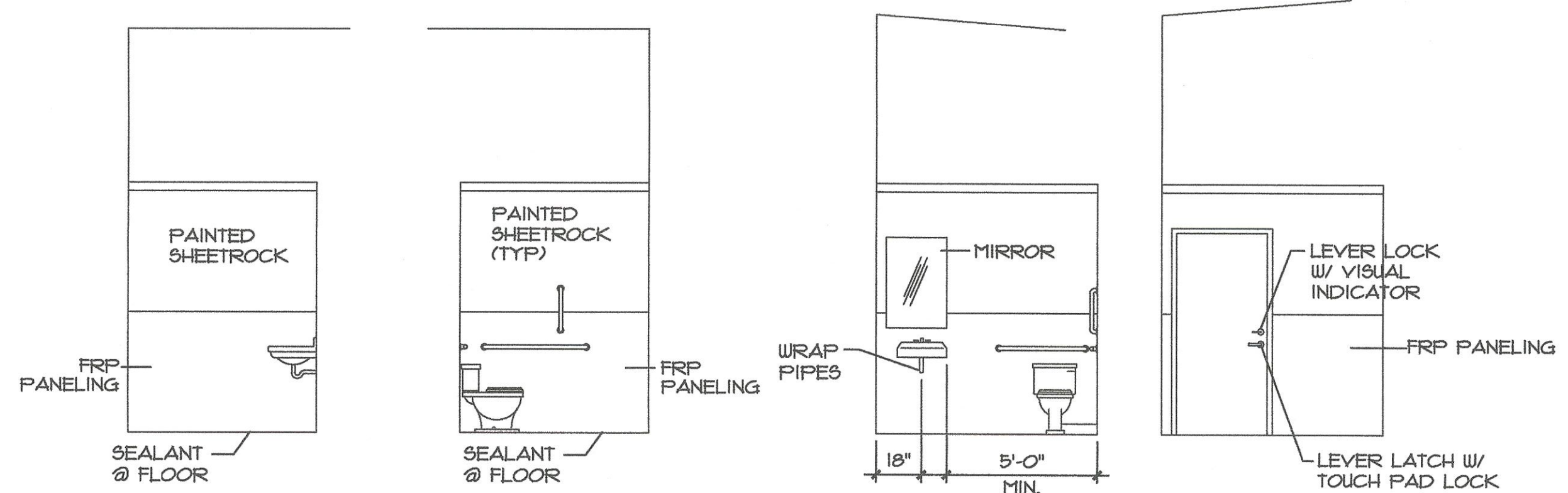
**LEFT ELEVATION**  
1"=10'



**RIGHT ELEVATION**  
1"=10'



**ADA GRAB BAR DETAIL**  
1/2"=1'-0"



**RESTROOM ELEVATIONS**  
1/4"=1'-0"

REVISIONS:

**Geomax** INC.  
BUILDING DESIGN  
806 N. NINTH STREET, COTTAGE GROVE, OREGON 97124  
TELEPHONE: (503) 942-0106 EMAIL: gmax@geomax.com

**RMCC**  
Registered Mechanical Contractors, LLC  
Engineers & Designers

PROJECT TITLE:  
**NEW RENT-A-SHOPS  
W.A. STEVENS CONST.  
COTTAGE GROVE, OR**

SHEET TITLE:  
**FLOOR & FOUNDATION PLANS**

DATE: 4/4/23

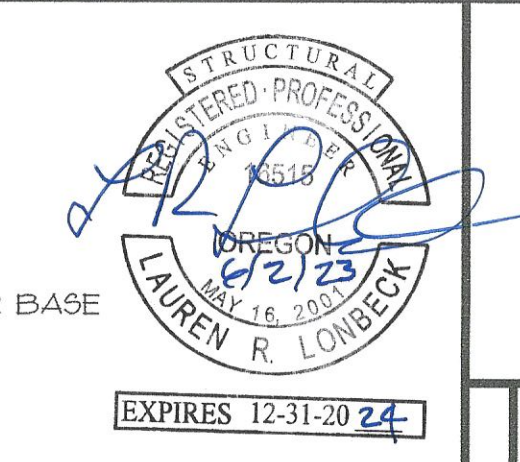
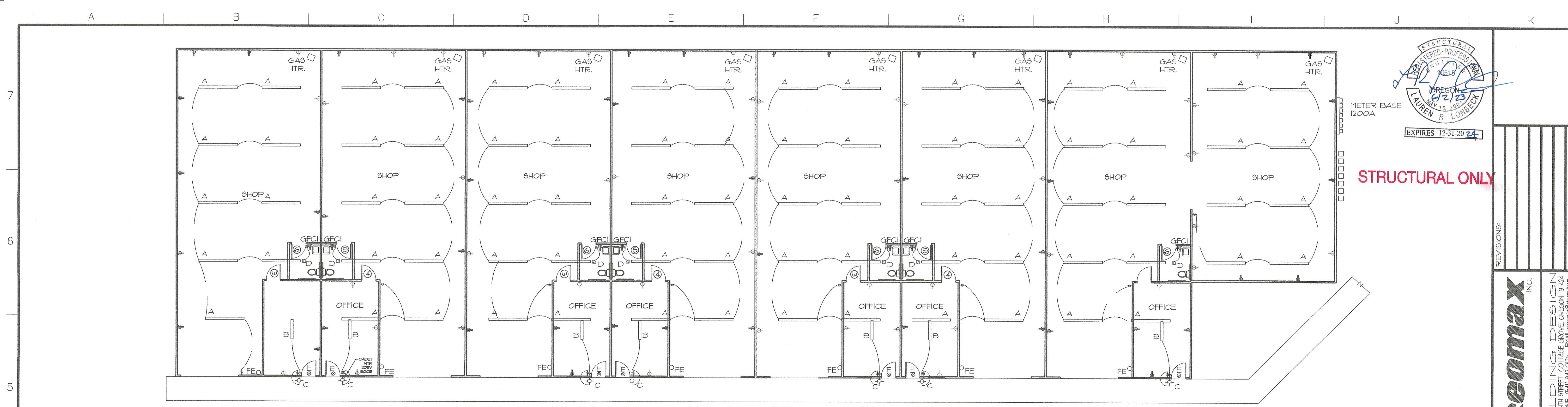
DESIGNER: R.L.C.

CHECKED BY: L.R.L.

FILE NO.: WO62AIDWJG

PROJECT NO.: **WO62**

SHEET NO.: **A 2**



STRUCTURAL ONLY

- LEGEND**
- A LITHONIA TC2321V 4-32W LAMPS
  - B LITHONIA MVOLT-ACMP 2-32W LAMPS
  - C 90 W LED WALL PACK
  - D VENT FAN W/ LIGHT VENT TO OUTSIDE
  - E LITHONIA "LHQM-LED" EXIT LIGHT W/BATTERY
  - FE TYPE 2A DRY CHEMICAL FIRE EXTINGUISHER
  - GFCI GROUND FAULT CURRENT INTERRUPTER
  - DRX DUPLEX RECEPTACLE
  - LS LIGHT SWITCH

- A AREA LIGHT "C"
- GAS UNIT HEATER  
15 KBTU  
EFFICIENCY RATING: 80%  
AUTOMATIC OUTSIDE AIR INTAKE

**ELECTRICAL PLAN**

1"=10'

**Geomax** INC.  
BUILDING DESIGN  
806 N. NINTH STREET, COTTAGE GROVE, OREGON 97124  
TELEPHONE: (541) 942-0106 EMAIL: geomax@geomax.com

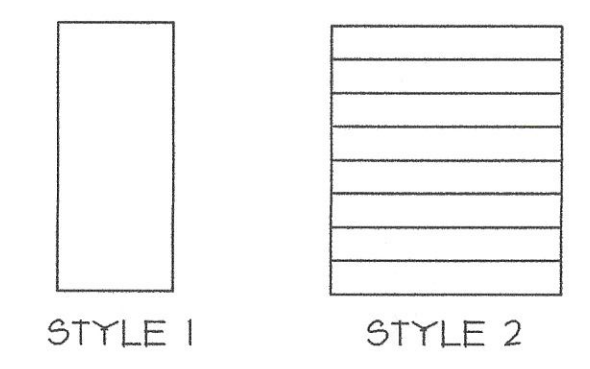
PROJECT TITLE:  
**NEW RENT-A-SHOPS  
W.A. STEVENS CONST.  
COTTAGE GROVE, OR**

SHEET TITLE:  
**FLOOR & FOUNDATION PLANS**

DATE: 4/4/23  
DESIGNER: R.L.C.  
CHECKED BY: L.R.L.  
FILE NO.: WO62A1.DWG  
PROJECT NO.:  
**WO62**  
SHEET NO.:  
**A 3**

**DOOR SCHEDULE**

DOOR NO.	SIZE	SWING	MAT'L	JAMB	HARDWARE	FINISH	STYLE	RATING	COMMENTS
1	3'-0"x6'-8"	RIGHT	STEEL	STEEL	GROUP 1	I	I	NONE	INSULATED, U=0.65
2	3'-0"x6'-8"	LEFT	STEEL	STEEL	GROUP 1	I	I	NONE	INSULATED, U=0.65
3	3'-0"x6'-8"	RIGHT	WOOD	WOOD	GROUP 2	I	I	NONE	
4	3'-0"x6'-8"	LEFT	WOOD	WOOD	GROUP 2	I	I	NONE	
5	3'-0"x6'-8"	LEFT	WOOD	WOOD	GROUP 3	I	I	NONE	
6	3'-0"x6'-8"	RIGHT	WOOD	WOOD	GROUP 3	I	I	NONE	
7	3'-0"x6'-8"	OVERHEAD	STEEL	STEEL	GROUP 4	I	2	NONE	INSULATED, U=0.65



FINISH: I. PAINT W/ EXT. LATEX ENAMEL

**GROUP 1**

- 3 EA BUTTS SC3P101IF619E ST
- 1 EA LOCKSET F51-LAT SCH
- 1 EA DEADBOLT B62T16 SCH
- 1 EA CLOSER D-1650PH-AL-3N ST
- 1 EA THRESHOLD 2T1D 36IN P
- 1 EA DOOR BOTTOM 216DV 36IN P
- 1 EA GASKET P30T4 1TFT STE

**GROUP 3**

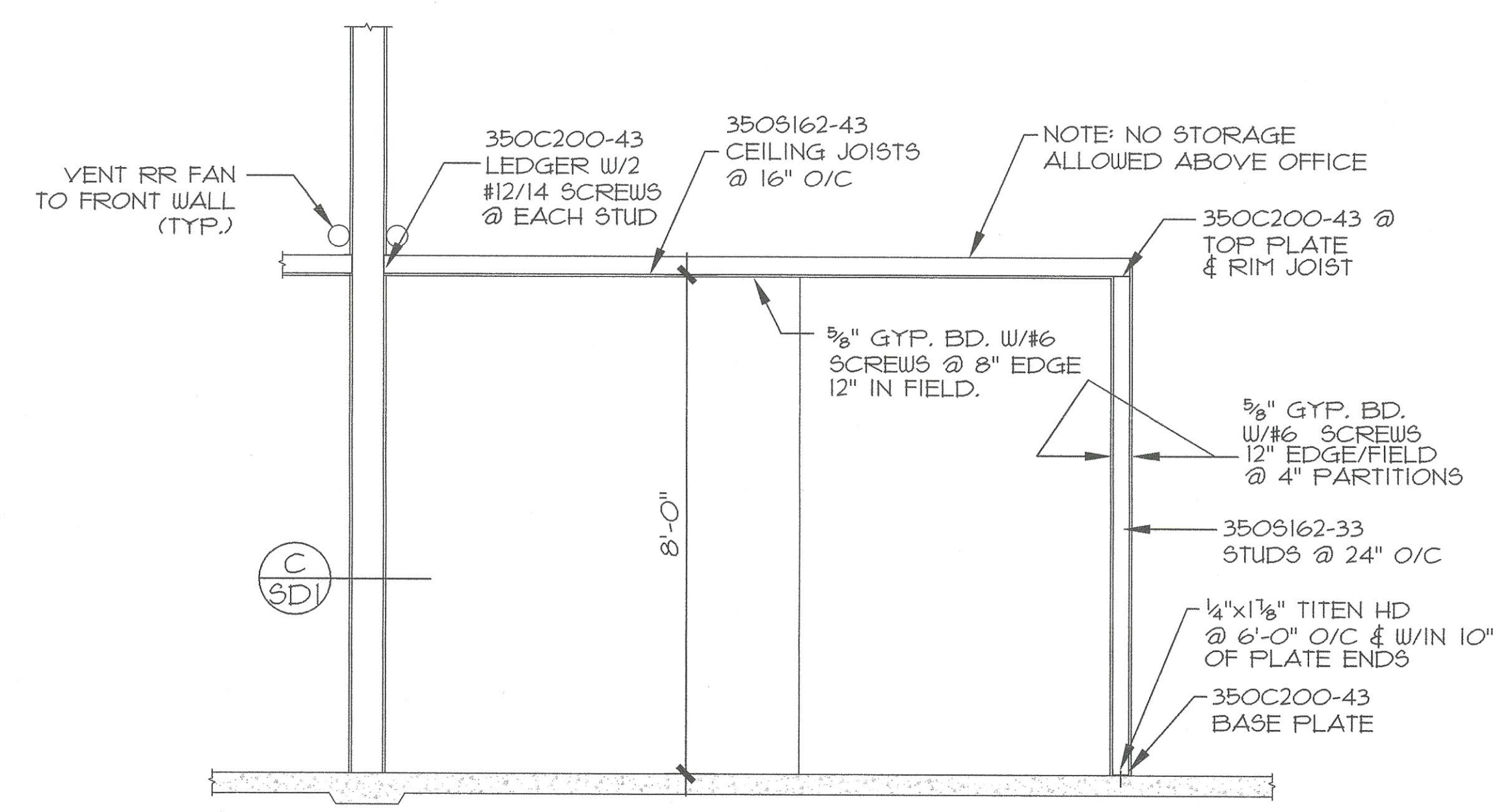
- 3 EA BUTTS SC3P101IF619E SCH
- 1 EA LOCKSET F10-LAT SCH
- 1 EA INDICATOR BOLT B5T1 SCH

**GROUP 4**

- STANDARD OHD HARDWARE
- RMX OPERATOR

**GROUP 2**

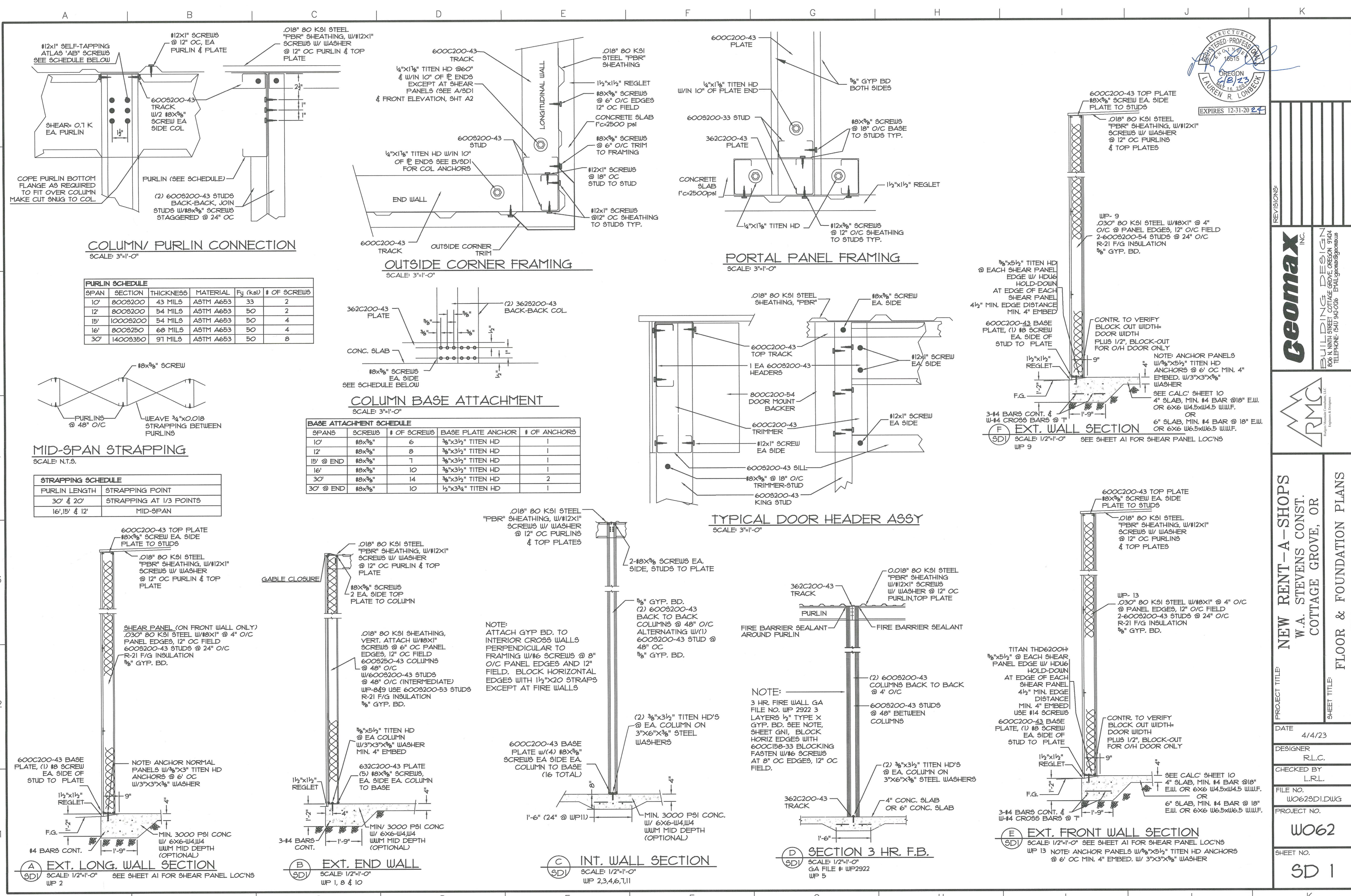
- 3 EA BUTTS SC3P101IF619E SCH
- 1 EA LOCKSET F51-LAT SCH
- 1 EA THRESHOLD 2T1D 36IN P
- 1 EA DOOR BOTTOM 216DV 36IN P
- 1 EA GASKET P30T4 1TFT STE



**OFFICE SECTION**

1/2"=1'-0"





**COLUMN/ PURLIN CONNECTION**  
SCALE: 3/4"=1'-0"

SPAN	SECTION	THICKNESS	MATERIAL	F <sub>y</sub> (ksi)	# OF SCREWS
10'	8008200	43 MILS	ASTM A653	33	2
12'	8008200	54 MILS	ASTM A653	50	2
15'	10008200	54 MILS	ASTM A653	50	4
16'	8008250	68 MILS	ASTM A653	50	4
30'	14008350	91 MILS	ASTM A653	50	8

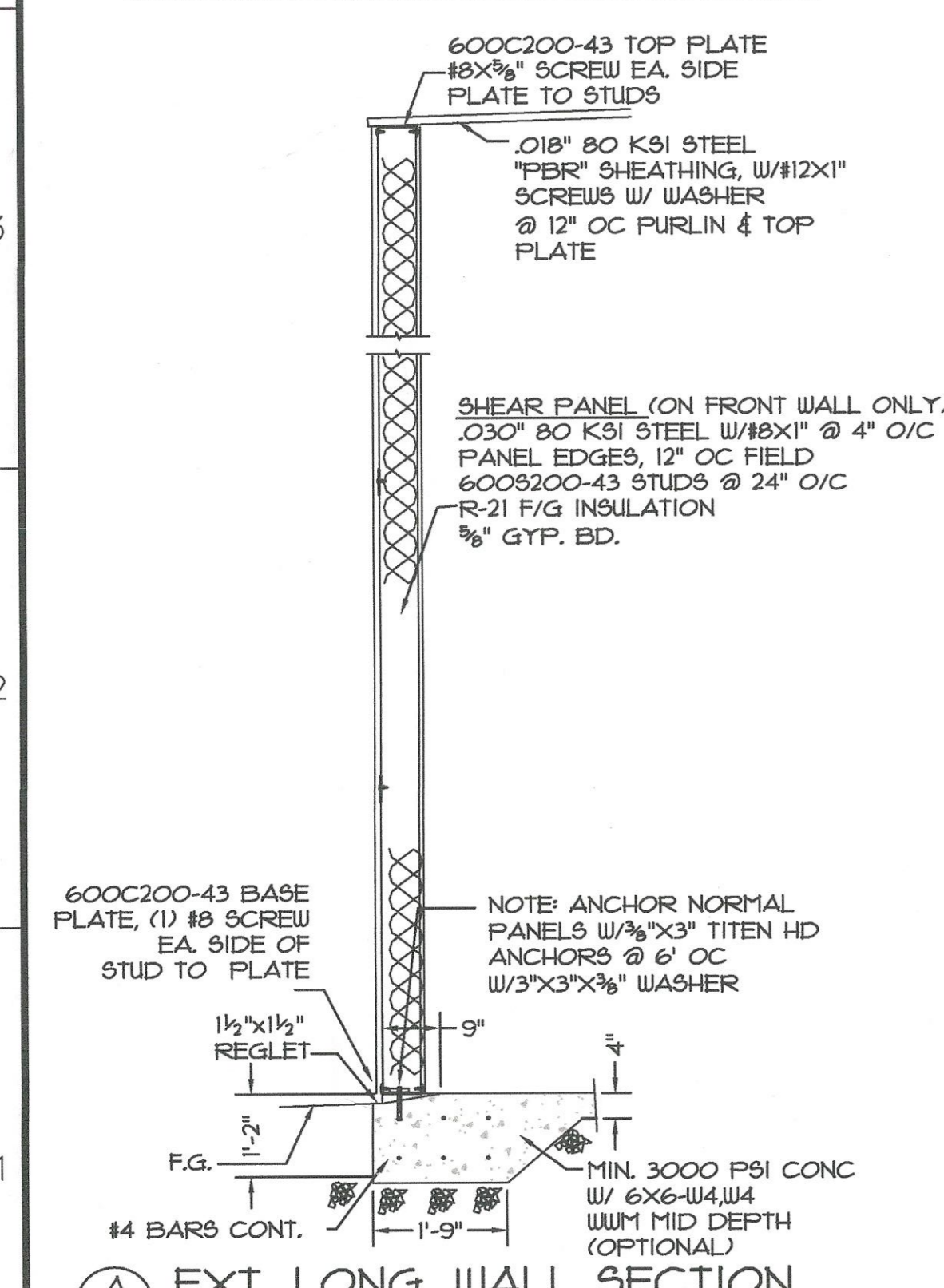
**OUTSIDE CORNER FRAMING**  
SCALE: 3/4"=1'-0"

**COLUMN BASE ATTACHMENT**  
SCALE: 3/4"=1'-0"

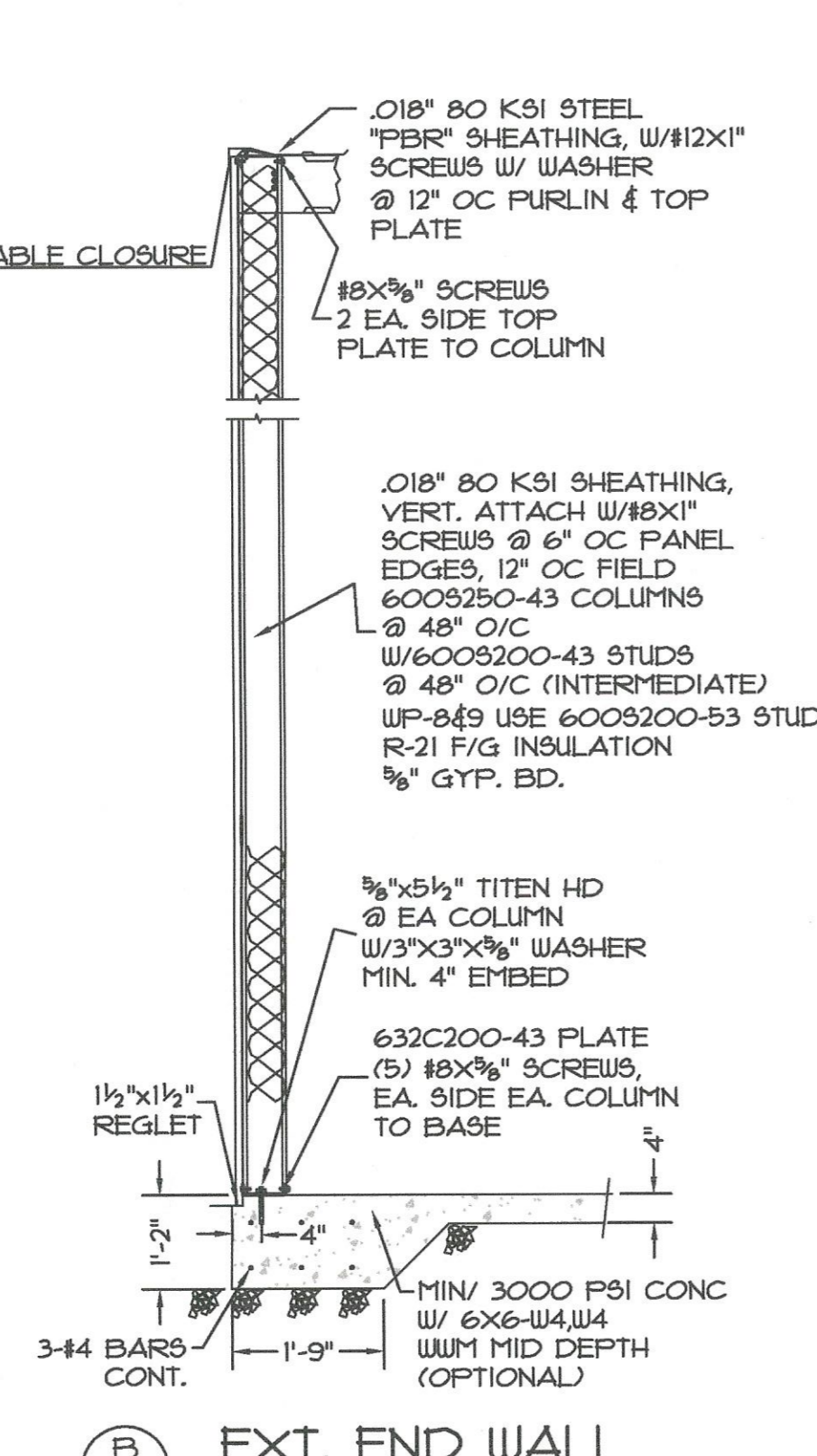
SPANS	SCREWS	# OF SCREWS	BASE PLATE ANCHOR	# OF ANCHORS
10'	#8x3/8"	6	3/8"x3 1/2" TITEN HD	1
12'	#8x3/8"	8	3/8"x3 1/2" TITEN HD	1
15' @ END	#8x3/8"	7	3/8"x3 1/2" TITEN HD	1
16'	#8x3/8"	10	3/8"x3 1/2" TITEN HD	1
30'	#8x3/8"	14	3/8"x3 1/2" TITEN HD	2
30' @ END	#8x3/8"	10	1/2"x3 3/4" TITEN HD	1

**MID-SPAN STRAPPING**  
SCALE: N.T.S.

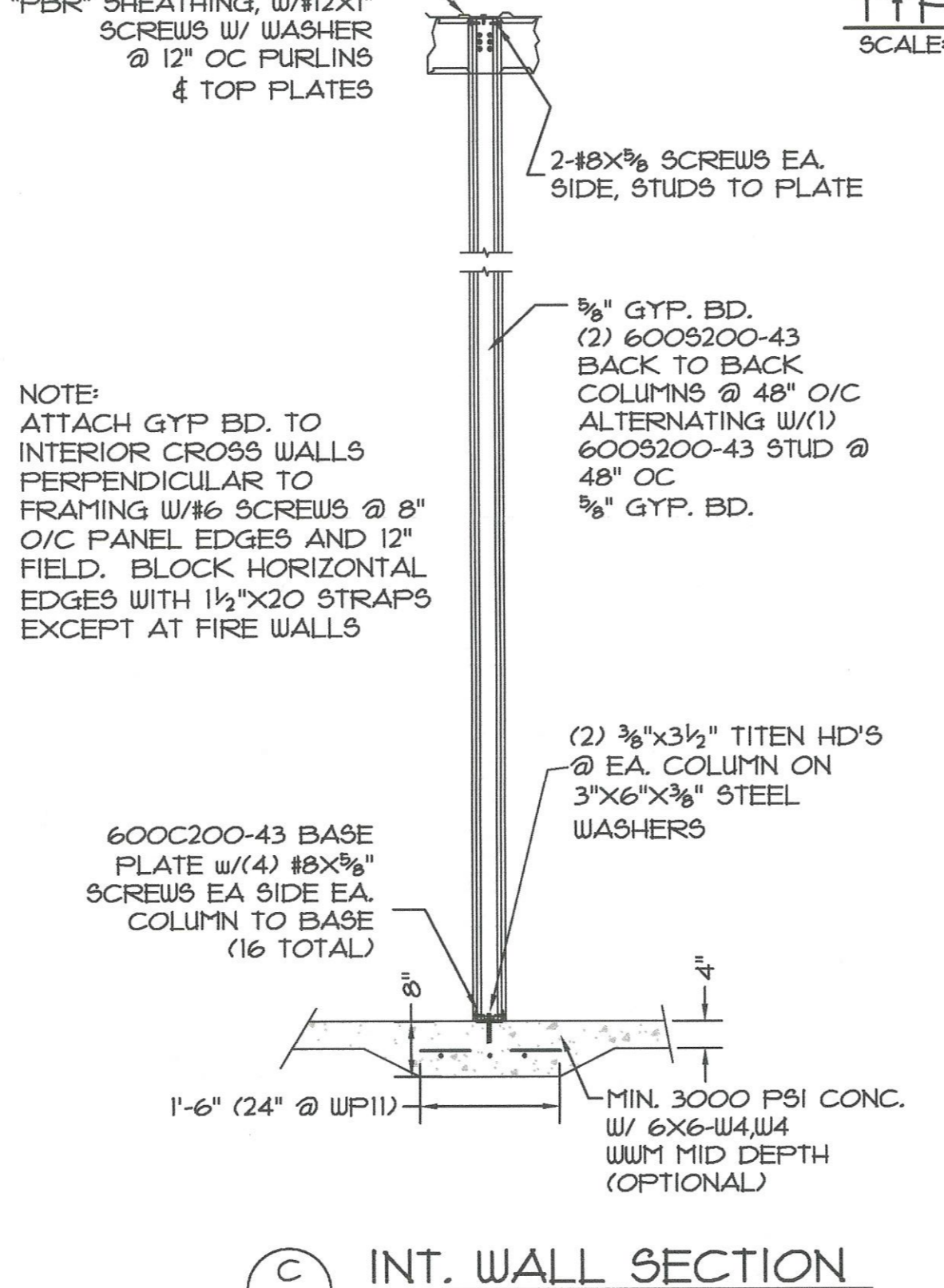
FURLIN LENGTH	STRAPPING POINT
30' & 20'	STRAPPING AT 1/3 POINTS
16', 15' & 12'	MID-SPAN



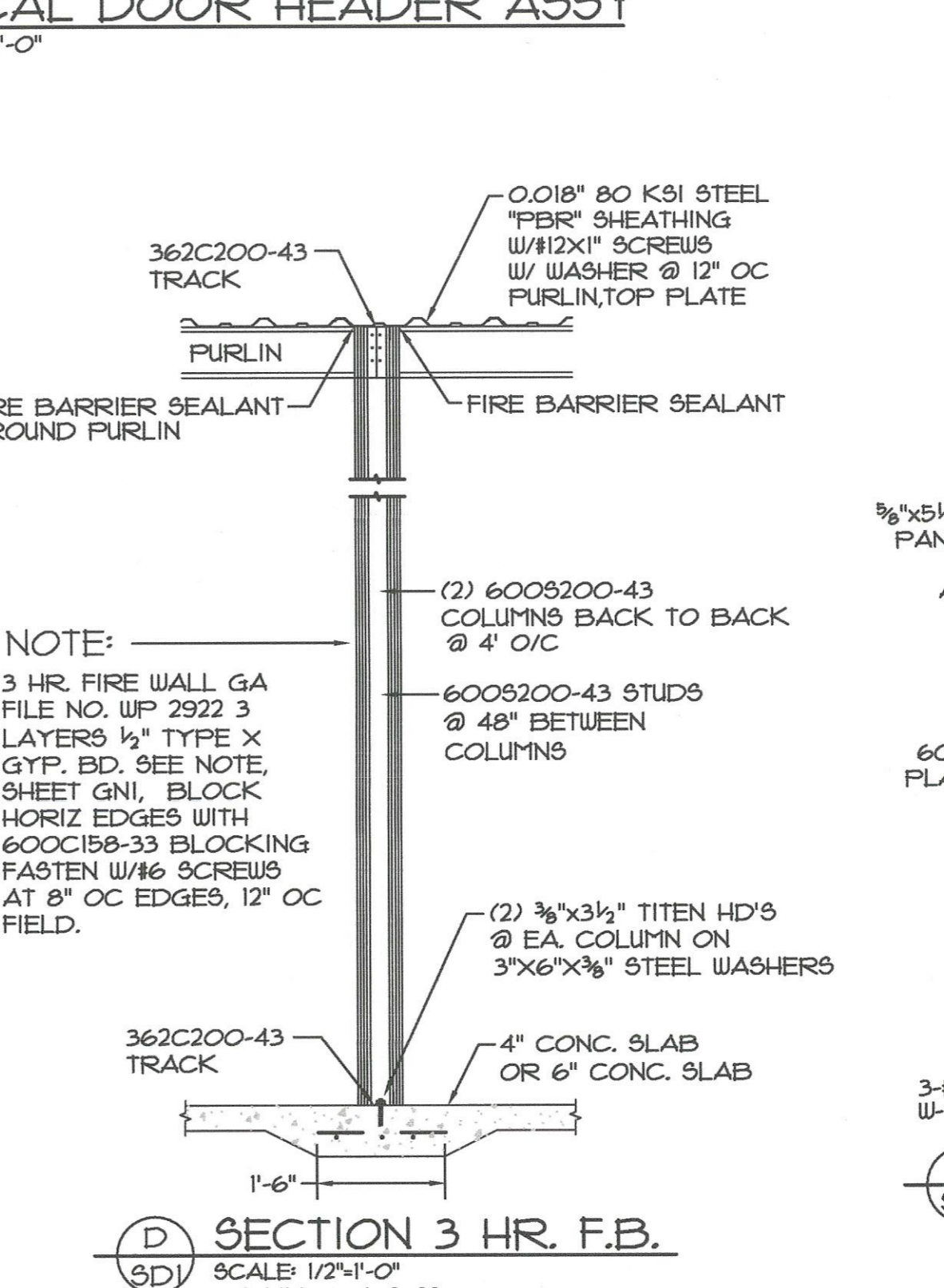
**(A) EXT. LONG. WALL SECTION**  
SCALE: 1/2"=1'-0" WP 2 SEE SHEET A1 FOR SHEAR PANEL LOC'NS



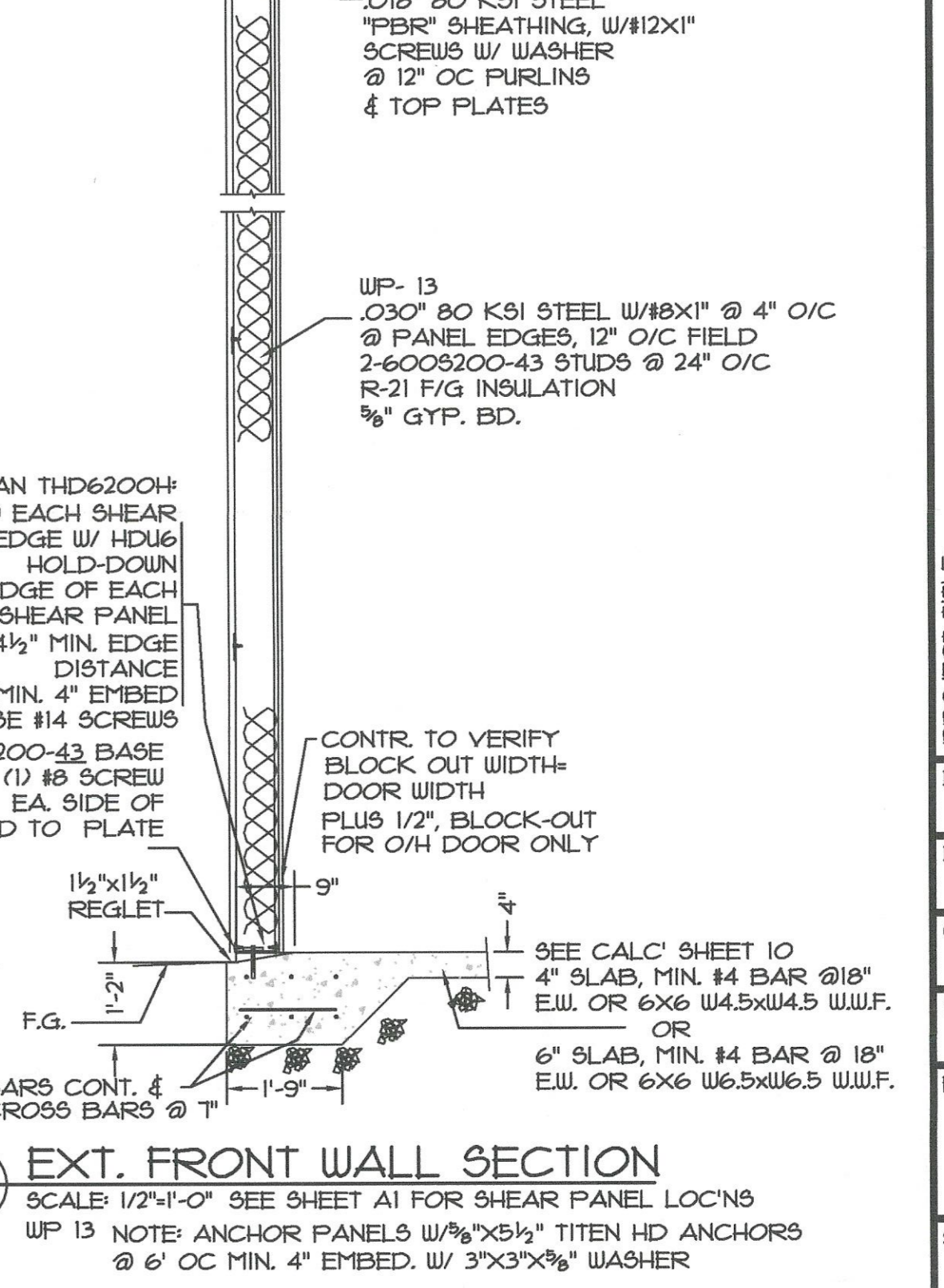
**(B) EXT. END WALL**  
SCALE: 1/2"=1'-0" WP 1, 8 & 10



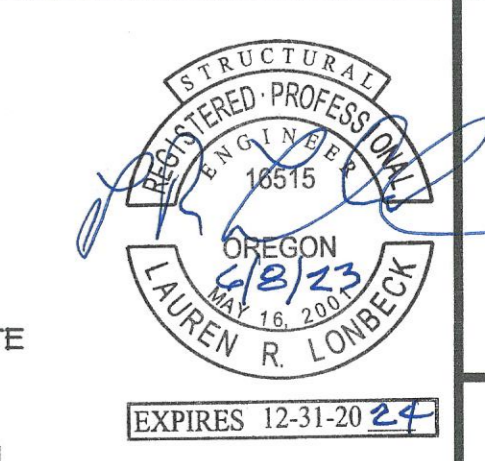
**(C) INT. WALL SECTION**  
SCALE: 1/2"=1'-0" WP 2,3,4,6,7,11



**(D) SECTION 3 HR. F.B.**  
SCALE: 1/2"=1'-0" GA FILE # WP2922 WP 5



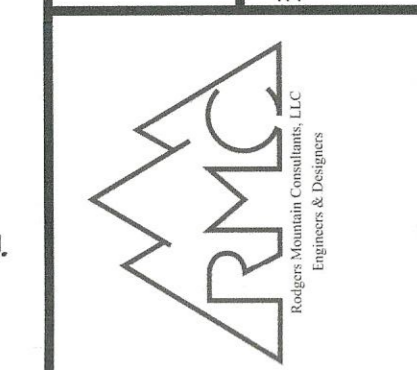
**(E) EXT. FRONT WALL SECTION**  
SCALE: 1/2"=1'-0" SEE SHEET A1 FOR SHEAR PANEL LOC'NS WP 13 NOTE: ANCHOR PANELS W/3/8"x5/8" TITEN HD ANCHORS @ 6' OC MIN. 4" EMBED. W/ 3"x3"x3/8" WASHER



REVISIONS:

NO.	DESCRIPTION

**Geomax** INC.  
BUILDING DESIGN  
8026 N. WINTH STREET, COTTAGE GROVE, OREGON 97142  
TELEPHONE: (503) 942-0026 EMAIL: geomax@geomax.com



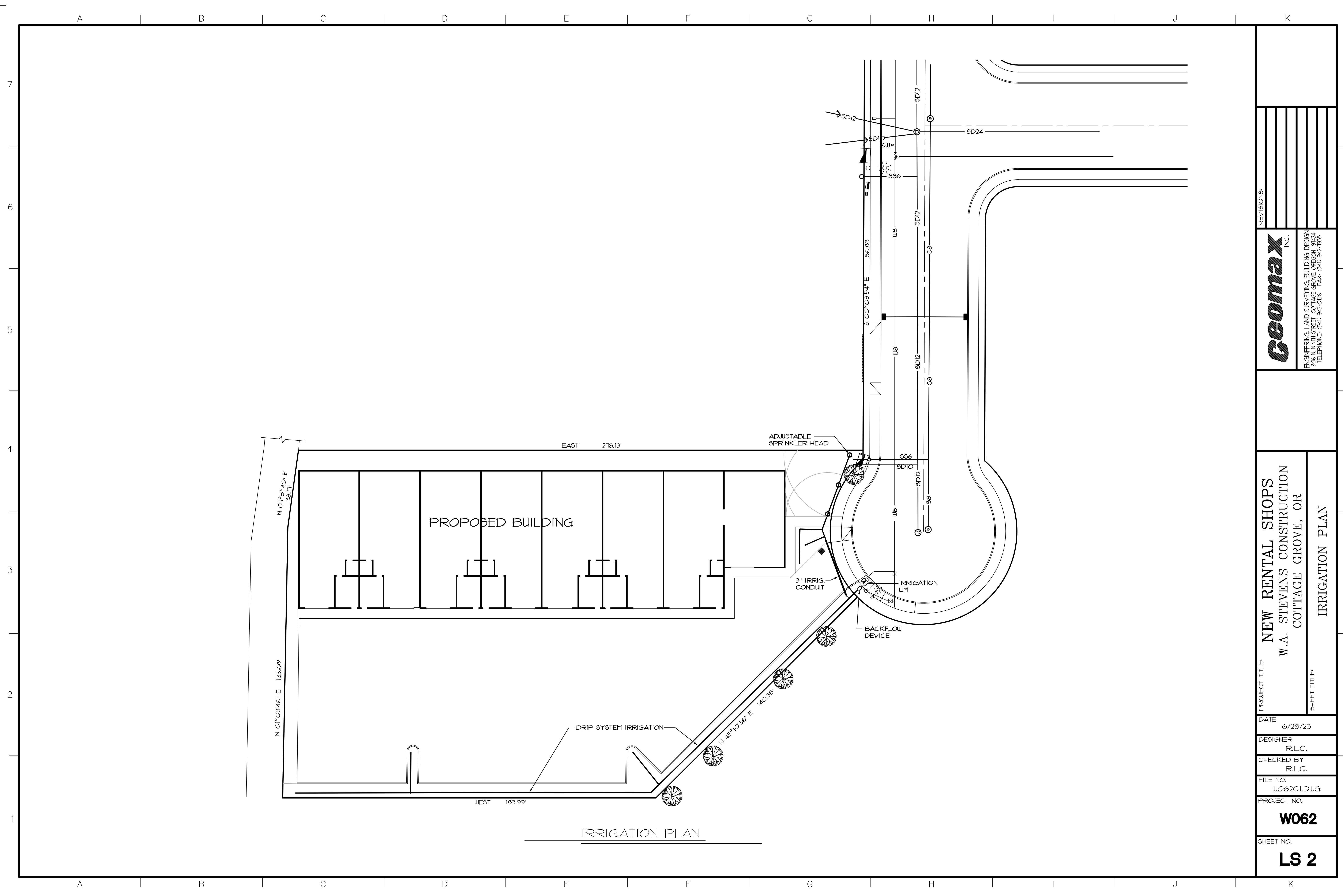
PROJECT TITLE: **NEW RENT-A-SHOPS**  
W.A. STEVENS CONST.  
COTTAGE GROVE, OR

SHEET TITLE: **FLOOR & FOUNDATION PLANS**

DATE: 4/4/23  
DESIGNER: R.L.C.  
CHECKED BY: L.R.L.  
FILE NO.: W062SD1.DWG  
PROJECT NO.: W062  
SHEET NO.: SD 1







IRRIGATION PLAN

REVISIONS:


**Geomax** INC.  
 ENGINEERING, LAND SURVEYING, BUILDING DESIGN  
 806 N NINTH STREET COTTAGE GROVE, OREGON 97124  
 TELEPHONE: (541) 942-0126 FAX: (541) 942-1935

PROJECT TITLE:  
**NEW RENTAL SHOPS**  
**W.A. STEVENS CONSTRUCTION**  
**COTTAGE GROVE, OR**

SHEET TITLE:  
**IRRIGATION PLAN**

DATE  
 6/28/23

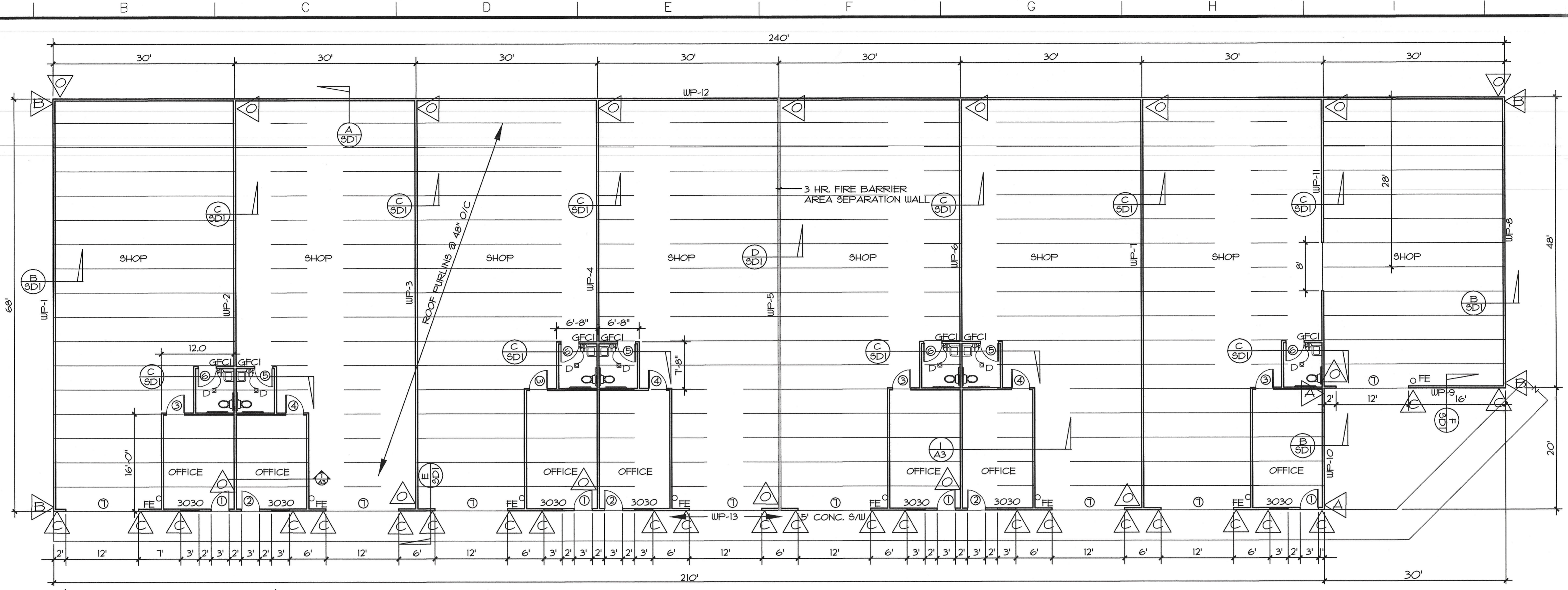
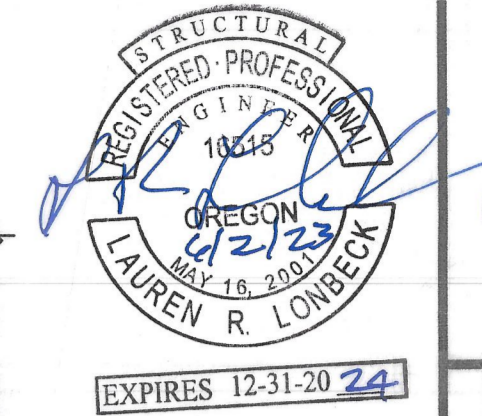
DESIGNER  
 R.L.C.

CHECKED BY  
 R.L.C.

FILE NO.  
 W062C1.DWG

PROJECT NO.  
**W062**

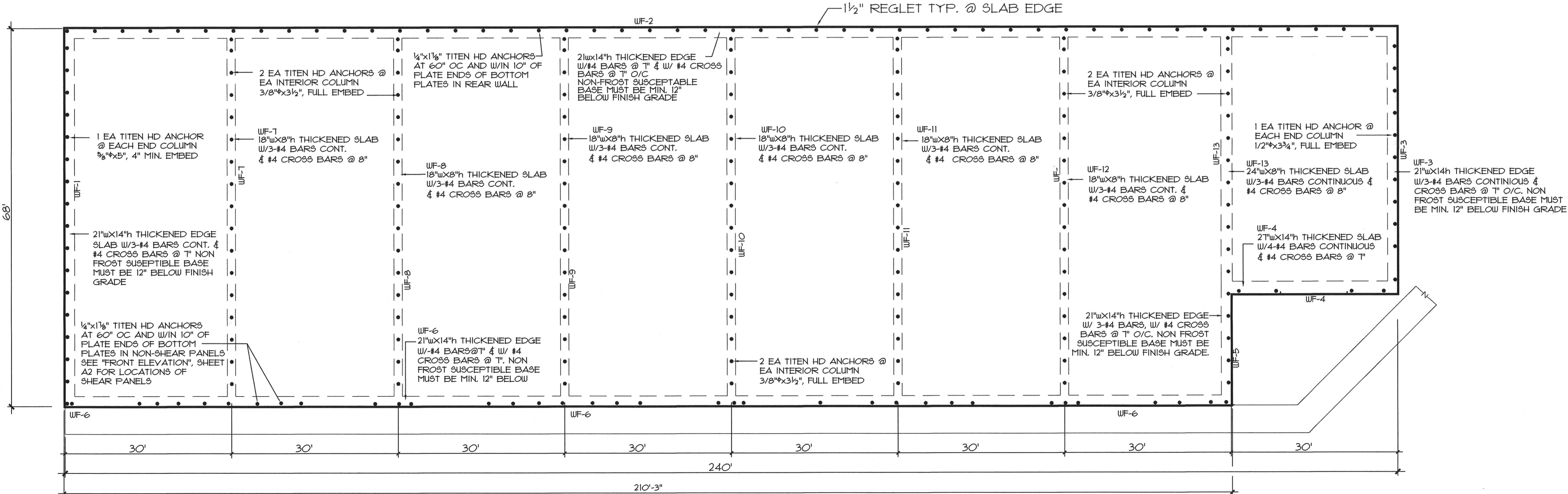
SHEET NO.  
**LS 2**



- HDU4, W/ THD62600H: 3/8"x6" MIN. EMBED 4", USE #14 SCREWS
- HDU4, W/ THD62800H: 3/8"x8" MIN. EMBED 5.5" USE #14 SCREWS
- HDU6, W/ THD62800H: 3/8"x8" MIN. EMBED 5.5" USE #14 SCREWS
- HDU6, W/ THD15812H: 3/4"x8.5" MIN. EMBED 6.25" USE #14 SCREWS
- NO HOLD DOWN REQUIRED

**FLOOR PLAN**

1"=10'



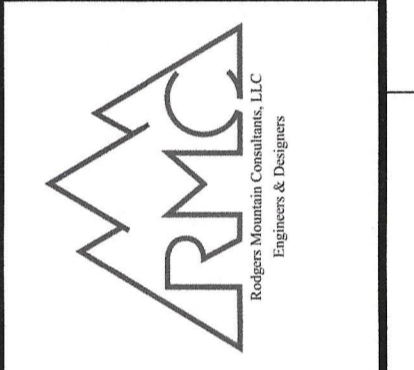
**FOUNDATION PLAN**

1"=10'

NOTE: 4" CONCRETE SLAB ON GRADE IS BASED ON NOMINAL HEAVY INDUSTRIAL LOADING. PROVIDE MIN. # 4 BAR @ 18" EACH WAY, OR 6X6X W4.5 X W4.5 WELDED WIRE FABRIC.

NO.	DESCRIPTION

**Geomax** INC.  
 BUILDING DESIGN  
 806 N. NINTH STREET, COTTAGE GROVE, OREGON 97424  
 TELEPHONE: (541) 542-0216 EMAIL: gmax@geomax.com

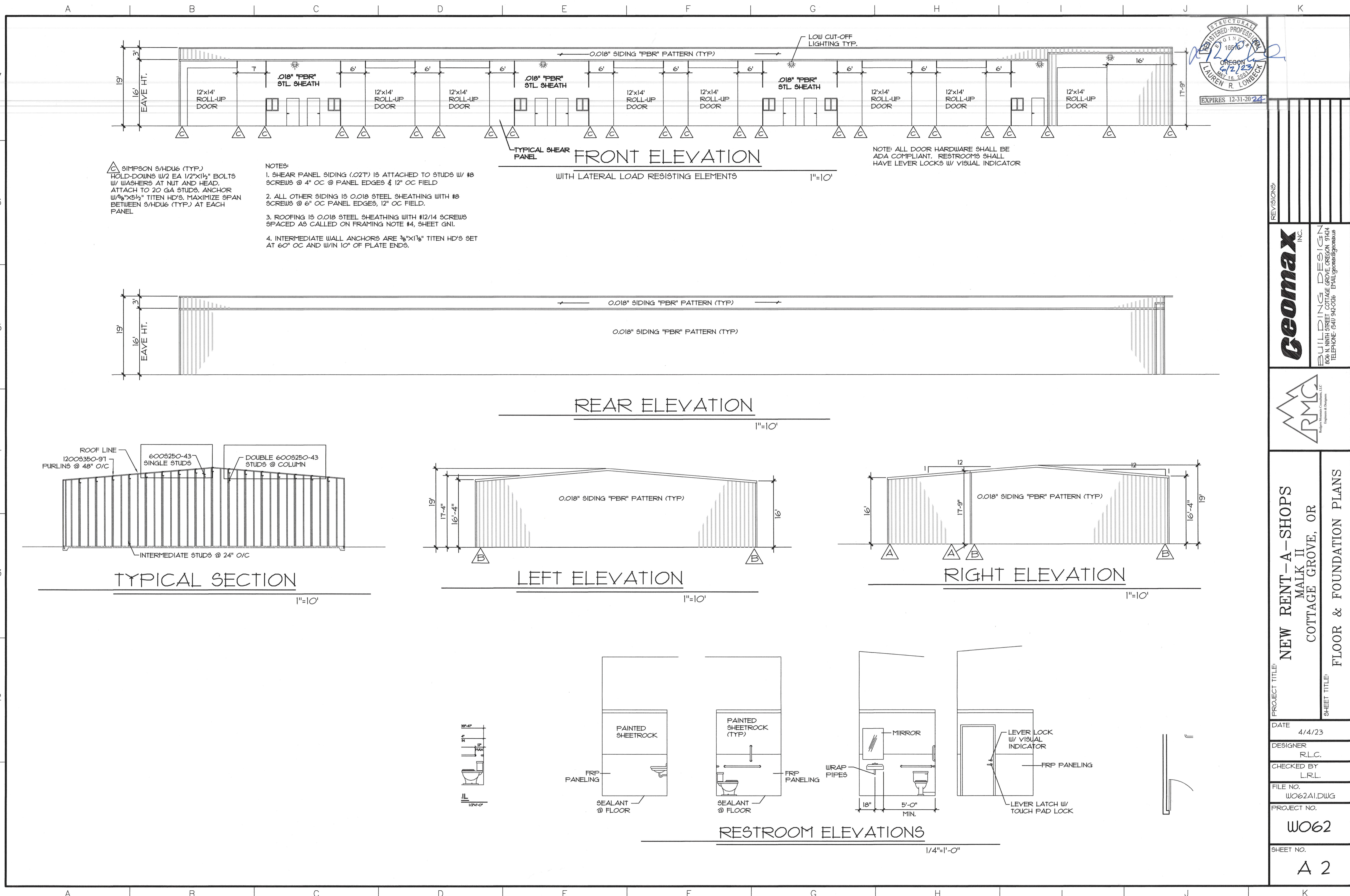


PROJECT TITLE: **NEW RENT-A-SHOPS  
 MALK II  
 COTTAGE GROVE, OR**

SHEET TITLE: **FLOOR & FOUNDATION PLANS**

DATE: 4/4/23  
 DESIGNER: R.L.C.  
 CHECKED BY: L.R.L.  
 FILE NO.: W062A1.DWG  
 PROJECT NO.: **W062**

SHEET NO.: **A 1**



STRUCTURAL  
 REGISTERED PROFESSIONAL ENGINEER  
 OREGON  
 672,233  
 LAUREN R. LOWBECK  
 EXPIRES 12-31-2024

△ SIMPSON S/HDU6 (TYP.)  
 HOLD-DOWNS W/2 EA 1/2"x1 1/2" BOLTS  
 W/ WASHERS AT NUT AND HEAD.  
 ATTACH TO 20 GA STUDS. ANCHOR  
 W/ 3/8"x5 1/2" TITEN HD'S. MAXIMIZE SPAN  
 BETWEEN S/HDU6 (TYP.) AT EACH  
 PANEL

- NOTES:
1. SHEAR PANEL SIDING (.02") IS ATTACHED TO STUDS W/ #8 SCREWS @ 4" OC @ PANEL EDGES & 12" OC FIELD
  2. ALL OTHER SIDING IS 0.018 STEEL SHEATHING WITH #8 SCREWS @ 6" OC PANEL EDGES, 12" OC FIELD.
  3. ROOFING IS 0.018 STEEL SHEATHING WITH #12/14 SCREWS SPACED AS CALLED ON FRAMING NOTE #4, SHEET GNI.
  4. INTERMEDIATE WALL ANCHORS ARE 3/8"x1 1/8" TITEN HD'S SET AT 60" OC AND W/IN 10" OF PLATE ENDS.

NOTE: ALL DOOR HARDWARE SHALL BE ADA COMPLIANT. RESTROOMS SHALL HAVE LEVER LOCKS W/ VISUAL INDICATOR

REVISIONS:

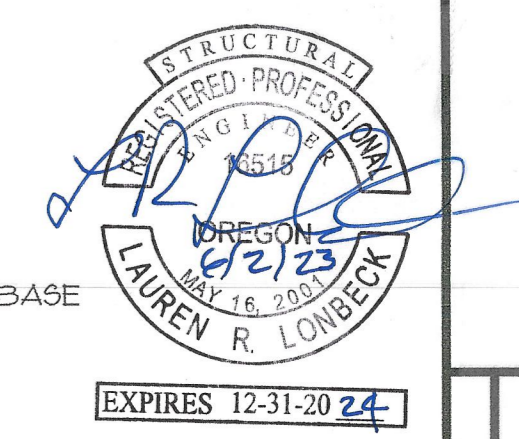
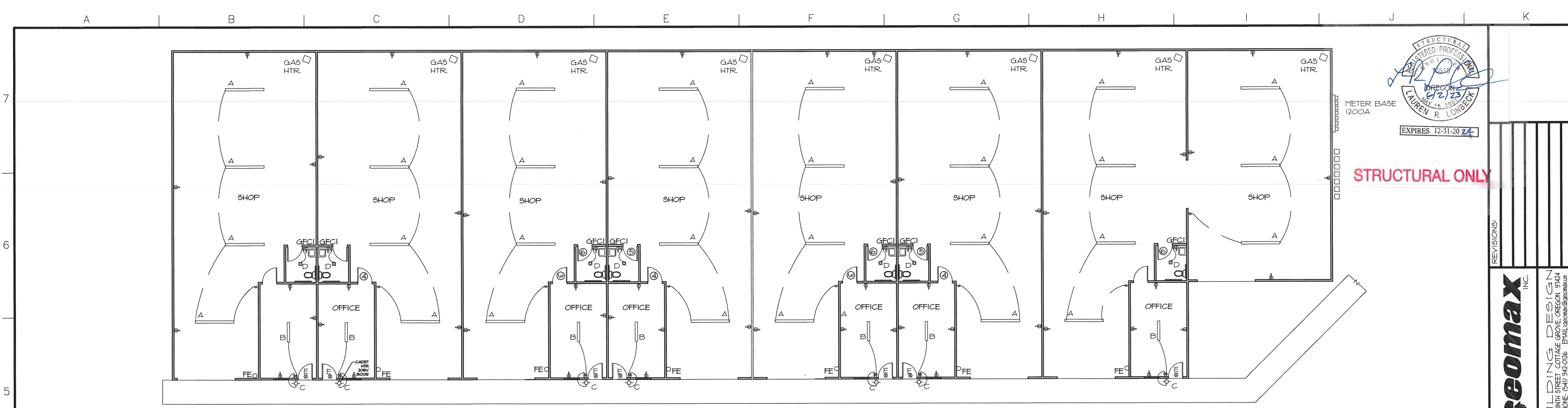

**Geomax** INC.  
 BUILDING DESIGN  
 806 N. NINTH STREET COTTAGE GROVE, OREGON 97124  
 TELEPHONE: (503) 942-0216 EMAIL: geomax@geomax.com

**RMCA**  
 Registered Architectural Consultant, LLC  
 Engineers & Designers

PROJECT TITLE: **NEW RENT-A-SHOPS  
MALK II  
COTTAGE GROVE, OR**  
 SHEET TITLE: **FLOOR & FOUNDATION PLANS**

DATE: 4/4/23  
 DESIGNER: R.L.C.  
 CHECKED BY: L.R.L.  
 FILE NO.: W062A1.DWG  
 PROJECT NO.: W062

SHEET NO. **A 2**



STRUCTURAL ONLY

- LEGEND**
- A PTL SOLUTIONS- PTL-90108 LED OR EQUAL
  - B PTL SOLUTIONS- PTL-11611 LED OR EQUAL
  - C 90 W LED WALL PACK
  - D VENT FAN- VENT TO OUTSIDE
  - E LITHONIA "LHQM-LED" EXIT LIGHT W/BATTERY
  - FE TYPE 2A DRY CHEMICAL FIRE EXTINGUISHER
  - GFCI GROUND FAULT CURRENT INTERRUPTER
  - SW DUPLEX RECEPTACLE
  - LS LIGHT SWITCH

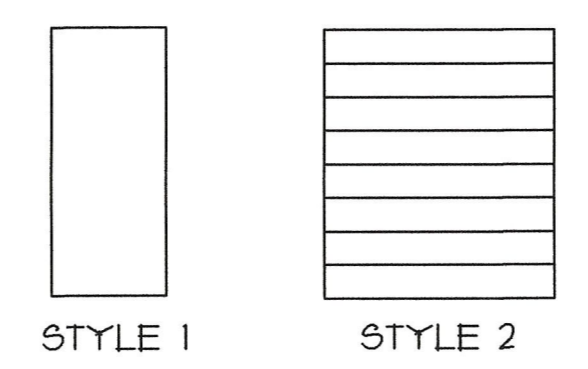
- LEGEND**
- A ——— AREA LIGHT "C"
  - B ———
  - C ———
  - D ——— GAS UNIT HEATER  
15 KBTU,  
EFFICIENCY RATING: 80%  
AUTOMATIC OUTSIDE AIR INTAKE
  - E ———
  - FE ———
  - GFCI ———
  - LS ———

**ELECTRICAL PLAN**

1/4"=1'-0"

**DOOR SCHEDULE**

DOOR NO.	SIZE	SWING	MAT'L	JAMB	HARDWARE	FINISH	STYLE	RATING	COMMENTS
1	3'-0"x6'-8"	RIGHT	STEEL	STEEL	GROUP 1	1	1	NONE	INSULATED, U=0.65
2	3'-0"x6'-8"	LEFT	STEEL	STEEL	GROUP 1	1	1	NONE	INSULATED, U=0.65
3	3'-0"x6'-8"	RIGHT	WOOD	WOOD	GROUP 2	1	1	NONE	
4	3'-0"x6'-8"	LEFT	WOOD	WOOD	GROUP 2	1	1	NONE	
5	3'-0"x6'-8"	LEFT	WOOD	WOOD	GROUP 3	1	1	NONE	
6	3'-0"x6'-8"	RIGHT	WOOD	WOOD	GROUP 3	1	1	NONE	
7	3'-0"x6'-8"	OVERHEAD	STEEL	STEEL	GROUP 4	1	2	NONE	INSULATED, U=0.65



FINISH: 1. PAINT W/ EXT. LATEX ENAMEL

**GROUP 1**

- 3 EA BUTTS SC3P1011F619E ST
- 1 EA LOCKSET F51-LAT SCH
- 1 EA DEADBOLT B62T16 SCH
- 1 EA CLOSER D-1650PH-AL-3N ST
- 1 EA THRESHOLD 271D 36IN P
- 1 EA DOOR BOTTOM 216DV 36IN P
- 1 EA GASKET P3074 17FT STE

**GROUP 3**

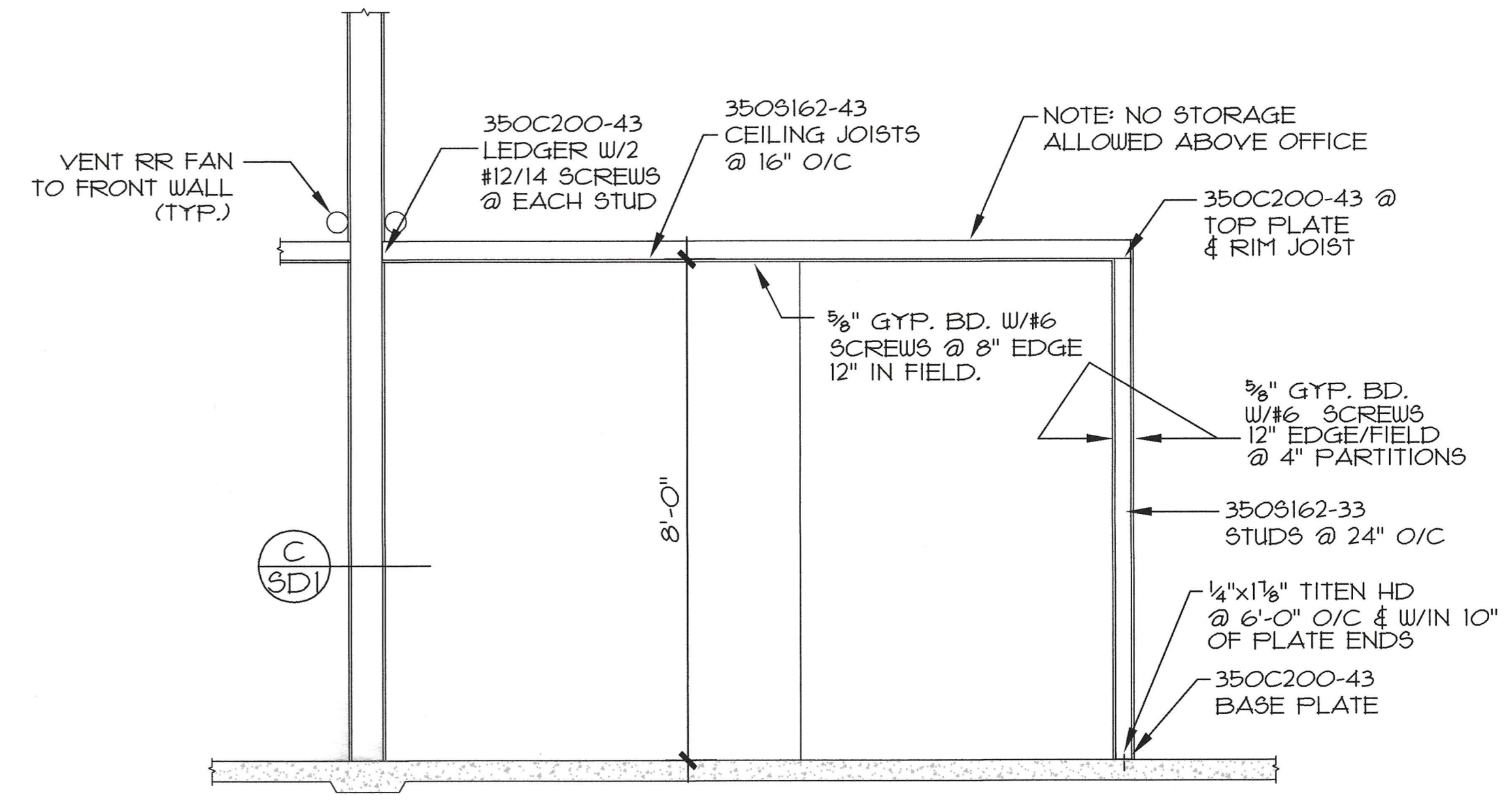
- 3 EA BUTTS SC3P1011F619E SCH
- 1 EA LOCKSET F10-LAT SCH
- 1 EA INDICATOR BOLT B571 SCH

**GROUP 4**

- STANDARD OHD HARDWARE
- RMX OPERATOR

**GROUP 2**

- 3 EA BUTTS SC3P1011F619E SCH
- 1 EA LOCKSET F51-LAT SCH
- 1 EA THRESHOLD 271D 36IN P
- 1 EA DOOR BOTTOM 216DV 36IN P
- 1 EA GASKET P3074 17FT STE



**OFFICE SECTION**

1/2"=1'-0"

REVISIONS:


**Geomax** INC.  
 BUILDING DESIGN  
 806 N. NINTH STREET  
 COTTAGE GROVE, OREGON 97124  
 TELEPHONE: (503) 542-0216 EMAIL: geomax@geomax.com

PROJECT TITLE: **NEW RENT-A-SHOPS  
MALK II  
COTTAGE GROVE, OR**

SHEET TITLE: **FLOOR & FOUNDATION PLANS**

DATE	4/4/23
DESIGNER	R.L.C.
CHECKED BY	L.R.L.
FILE NO.	W062A1.DWG
PROJECT NO.	W062
SHEET NO.	A 3

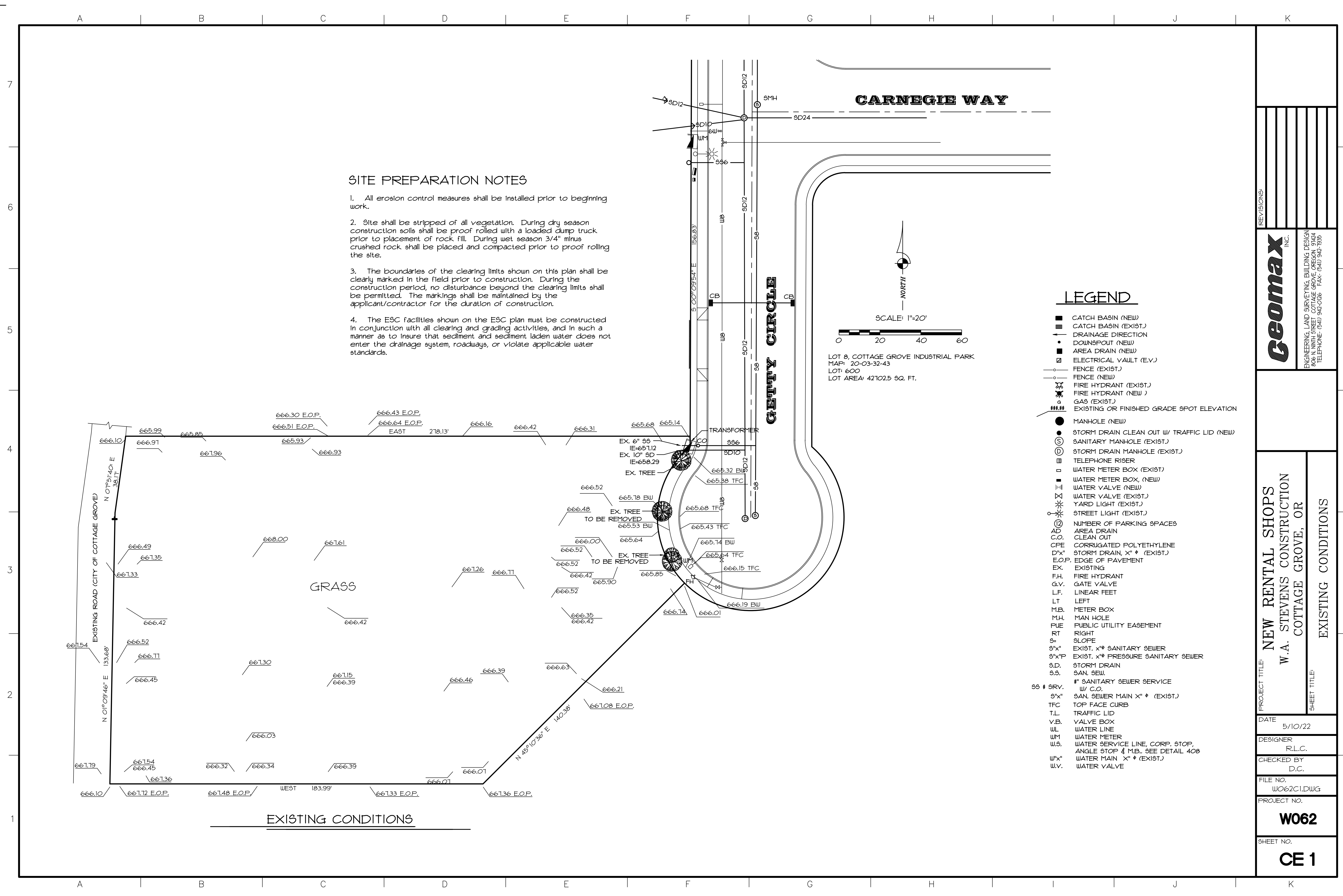


# BUILDING PERMIT APPLICATION

CATEGORY		JOB SITE INFORMATION
<input type="checkbox"/> 1- and 2-family dwelling	<input type="checkbox"/> Commercial / Industrial	Project Name:
<input type="checkbox"/> Accessory Structure	<input type="checkbox"/> Multi-family	Job Site Address:
<input type="checkbox"/> Demolition	<input type="checkbox"/> Other:	Map / Parcel No.:
TYPE OF WORK		DESCRIPTION OF WORK – PLEASE BE SPECIFIC
<input type="checkbox"/> New construction	<input type="checkbox"/> Hood Suppression	
<input type="checkbox"/> Add / Alter / Replace	<input type="checkbox"/> Fire Alarm	
<input type="checkbox"/> Tenant Improvement	<input type="checkbox"/> Fire Sprinkler	
<input type="checkbox"/> Mechanical	<input type="checkbox"/> Plumbing	
<input type="checkbox"/> Other:		
PROPERTY OWNER INFORMATION		NOTICE
Business Name:		TIME LIMITATION OF APPLICATION. AN APPLICATION FOR A PERMIT FOR ANY PROPOSED WORK SHALL BE DEEMED TO HAVE BEEN ABANDONED 180 DAYS AFTER THE DATE OF FILING, UNLESS SUCH APPLICATION HAS BEEN PURSUED IN GOOD FAITH OR A PERMIT HAS BEEN ISSUED; EXCEPT THAT THE BUILDING OFFICIAL IS AUTHORIZED TO GRANT ONE OR MORE EXTENSION OF TIME FOR ADDITIONAL PERIODS NOT EXCEEDING 180 DAYS EACH. THE EXTENSION SHALL BE REQUESTED IN WRITING AND JUSTIFIABLE CAUSE DEMONSTRATED
Contact Name:		
Address:		
City/State/Zip:		
Phone:		
Email:		
APPLICANT/ PRIMARY CONTACT INFORMATION		RESIDENTIAL / COMMERCIAL / INDUSTRIAL
Business Name:		PERMIT FEES ARE BASED ON THE VALUE OF THE WORK PERFORMED. INDICATE THE VALUE (ROUNDED TO THE NEAREST DOLLAR) OF ALL EQUIPMENT, MATERIALS, LABOR, OVERHEAD, AND THE PROFIT FOR THE WORK INDICATED ON THIS APPLICATION.
Contact Name:		
Address:		
City/State/Zip:		TOTAL VALUATION
Phone:		
Email:		
CONTRACTOR INFORMATION		BUILDING DEPARTMENT COMMENTS
Business Name:		
Contact Name:		
Address:		
City/State/Zip:		
Phone:		
Email:		
CCB:		

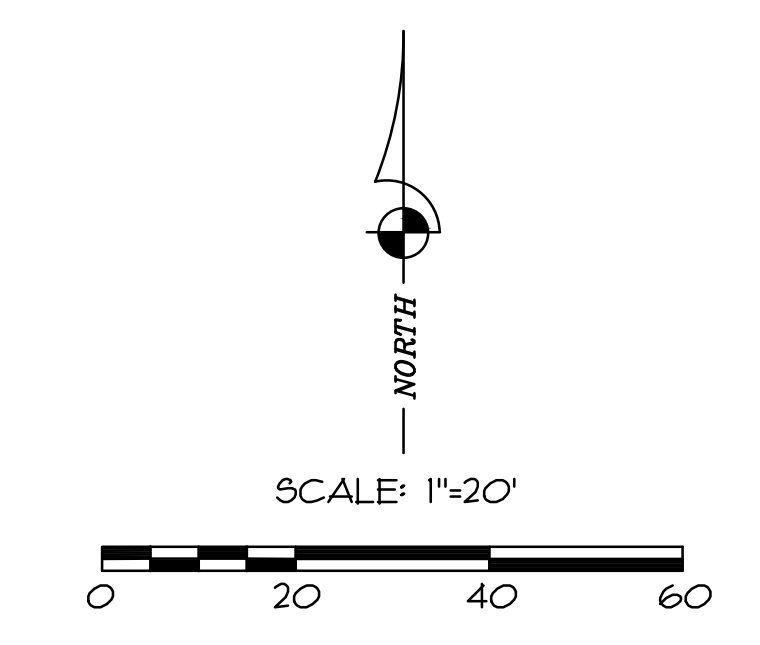
**APPLY ONLINE AT [WWW.BUILDINGPERMITS.OREGON.GOV](http://WWW.BUILDINGPERMITS.OREGON.GOV)**





**SITE PREPARATION NOTES**

1. All erosion control measures shall be installed prior to beginning work.
2. Site shall be stripped of all vegetation. During dry season construction soils shall be proof rolled with a loaded dump truck prior to placement of rock fill. During wet season 3/4" minus crushed rock shall be placed and compacted prior to proof rolling the site.
3. The boundaries of the clearing limits shown on this plan shall be clearly marked in the field prior to construction. During the construction period, no disturbance beyond the clearing limits shall be permitted. The markings shall be maintained by the applicant/contractor for the duration of construction.
4. The ESC facilities shown on the ESC plan must be constructed in conjunction with all clearing and grading activities, and in such a manner as to insure that sediment and sediment laden water does not enter the drainage system, roadways, or violate applicable water standards.

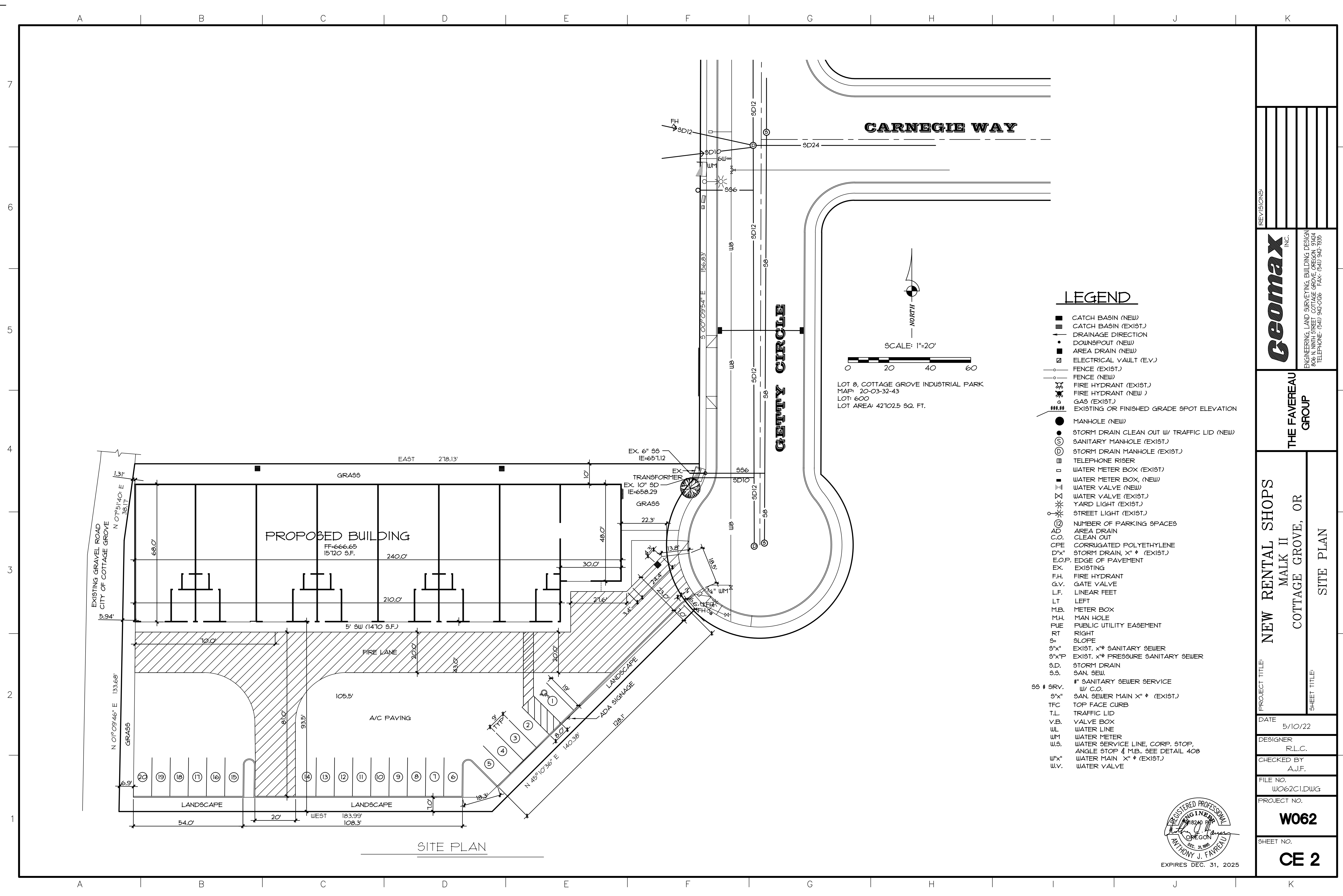


LOT 8, COTTAGE GROVE INDUSTRIAL PARK  
 MAP: 20-03-32-43  
 LOT: 600  
 LOT AREA: 42702.5 SQ. FT.

**LEGEND**

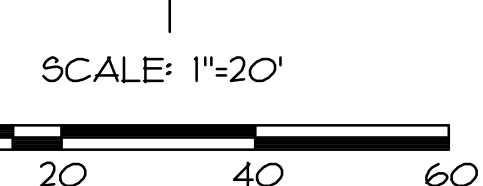
- CATCH BASIN (NEW)
- ▣ CATCH BASIN (EXIST.)
- DRAINAGE DIRECTION
- DOWNSPOUT (NEW)
- AREA DRAIN (NEW)
- ELECTRICAL VAULT (E.V.)
- FENCE (EXIST.)
- FENCE (NEW)
- ⊙ FIRE HYDRANT (EXIST.)
- ⊙ FIRE HYDRANT (NEW)
- ⊙ GAS (EXIST.)
- ### EXISTING OR FINISHED GRADE SPOT ELEVATION
- MANHOLE (NEW)
- STORM DRAIN CLEAN OUT W/ TRAFFIC LID (NEW)
- ⊙ SANITARY MANHOLE (EXIST.)
- ⊙ STORM DRAIN MANHOLE (EXIST.)
- TELEPHONE RISER
- WATER METER BOX (EXIST.)
- WATER METER BOX (NEW)
- ▣ WATER VALVE (NEW)
- ▣ WATER VALVE (EXIST.)
- ⊙ YARD LIGHT (EXIST.)
- ⊙ STREET LIGHT (EXIST.)
- ⊙ NUMBER OF PARKING SPACES
- AD AREA DRAIN CLEAN OUT
- C.O. CLEAN OUT
- CPE CORRUGATED POLYETHYLENE
- D"x" STORM DRAIN, X" ⊙ (EXIST.)
- E.O.P. EDGE OF PAVEMENT
- EX. EXISTING
- F.H. FIRE HYDRANT
- G.V. GATE VALVE
- LF. LINEAR FEET
- LT LEFT
- M.B. METER BOX
- M.H. MAN HOLE
- P.U.E. PUBLIC UTILITY EASEMENT
- RT RIGHT
- S= SLOPE
- S"x" EXIST. X" ⊙ SANITARY SEWER
- S"x" P EXIST. X" ⊙ PRESSURE SANITARY SEWER
- S.D. STORM DRAIN
- S.S. SAN. SEW.
- #" SANITARY SEWER SERVICE
- W/ C.O.
- S"x" SAN. SEWER MAIN X" ⊙ (EXIST.)
- TFC TOP FACE CURB
- T.L. TRAFFIC LID
- V.B. VALVE BOX
- WL WATER LINE
- WM WATER METER
- W.S. WATER SERVICE LINE, CORP. STOP, ANGLE STOP & M.B. SEE DETAIL 408
- W"x" WATER MAIN X" ⊙ (EXIST.)
- W.V. WATER VALVE

REVISIONS:	
<b>Geomax</b> INC.	ENGINEERING, LAND SURVEYING, BUILDING DESIGN 806 N NINTH STREET, COTTAGE GROVE, OREGON 97024 TELEPHONE: (503) 942-0706 FAX: (503) 942-1995
PROJECT TITLE:	NEW RENTAL SHOPS W.A. STEVENS CONSTRUCTION COTTAGE GROVE, OR
SHEET TITLE:	EXISTING CONDITIONS
DATE:	5/10/22
DESIGNER:	R.L.C.
CHECKED BY:	D.C.
FILE NO.:	W062C1.DWG
PROJECT NO.:	W062
SHEET NO.:	CE 1



**CARNEGIE WAY**

**GENTRY CIRCLE**



LOT 6, COTTAGE GROVE INDUSTRIAL PARK  
 MAP: 20-03-32-43  
 LOT: 600  
 LOT AREA: 42102.5 SQ. FT.

**LEGEND**

- CATCH BASIN (NEW)
- CATCH BASIN (EXIST.)
- DRAINAGE DIRECTION
- DOWNSPOUT (NEW)
- AREA DRAIN (NEW)
- ELECTRICAL VAULT (E.V.)
- FENCE (EXIST.)
- FENCE (NEW)
- ⊗ FIRE HYDRANT (EXIST.)
- ⊗ FIRE HYDRANT (NEW)
- ⊗ GAS (EXIST.)
- ### EXISTING OR FINISHED GRADE SPOT ELEVATION
- MANHOLE (NEW)
- STORM DRAIN CLEAN OUT W/ TRAFFIC LID (NEW)
- ⊙ SANITARY MANHOLE (EXIST.)
- ⊙ STORM DRAIN MANHOLE (EXIST.)
- TELEPHONE RISER
- WATER METER BOX (EXIST.)
- WATER METER BOX (NEW)
- WATER VALVE (NEW)
- ⊗ WATER VALVE (EXIST.)
- ⊗ YARD LIGHT (EXIST.)
- ⊗ STREET LIGHT (EXIST.)
- ⊙ NUMBER OF PARKING SPACES
- AD AREA DRAIN CLEAN OUT
- C.O. CORRUGATED POLYETHYLENE
- D"x" STORM DRAIN, X" ⊕ (EXIST.)
- E.O.P. EDGE OF PAVEMENT
- EX. EXISTING
- F.H. FIRE HYDRANT
- G.V. GATE VALVE
- L.F. LINEAR FEET
- LT LEFT
- M.B. METER BOX
- M.H. MAN HOLE
- P.U.E. PUBLIC UTILITY EASEMENT
- RT RIGHT
- S- SLOPE
- S"x" EXIST. x" ⊕ SANITARY SEWER
- S"x"P EXIST. x" ⊕ PRESSURE SANITARY SEWER
- S.D. STORM DRAIN
- S.S. SAN. SEW.
- #" SANITARY SEWER SERVICE W/ C.O.
- S"x" SAN. SEWER MAIN X" ⊕ (EXIST.)
- TFC TOP FACE CURB
- T.L. TRAFFIC LID
- V.B. VALVE BOX
- WL WATER LINE
- WM WATER METER
- W.S. WATER SERVICE LINE, CORP. STOP, ANGLE STOP & M.B. SEE DETAIL 408
- W"x" WATER MAIN X" ⊕ (EXIST.)
- W.V. WATER VALVE

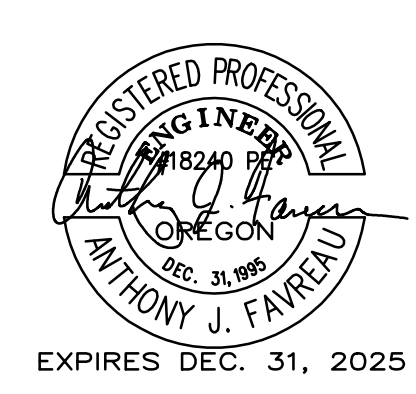
REVISIONS:


**Geomax** INC.  
 ENGINEERING, LAND SURVEYING, BUILDING DESIGN  
 806 N NINTH STREET, COTTAGE GROVE, OREGON 97024  
 TELEPHONE: (503) 942-0706 FAX: (503) 942-1995

**THE FAVEREAU GROUP**

**NEW RENTAL SHOPS  
 MALK II  
 COTTAGE GROVE, OR  
 SITE PLAN**

PROJECT TITLE:	NEW RENTAL SHOPS MALK II COTTAGE GROVE, OR SITE PLAN
DATE:	5/10/22
DESIGNER:	R.L.C.
CHECKED BY:	A.J.F.
FILE NO.:	W062C1.DWG
PROJECT NO.:	W062
SHEET NO.:	CE 2

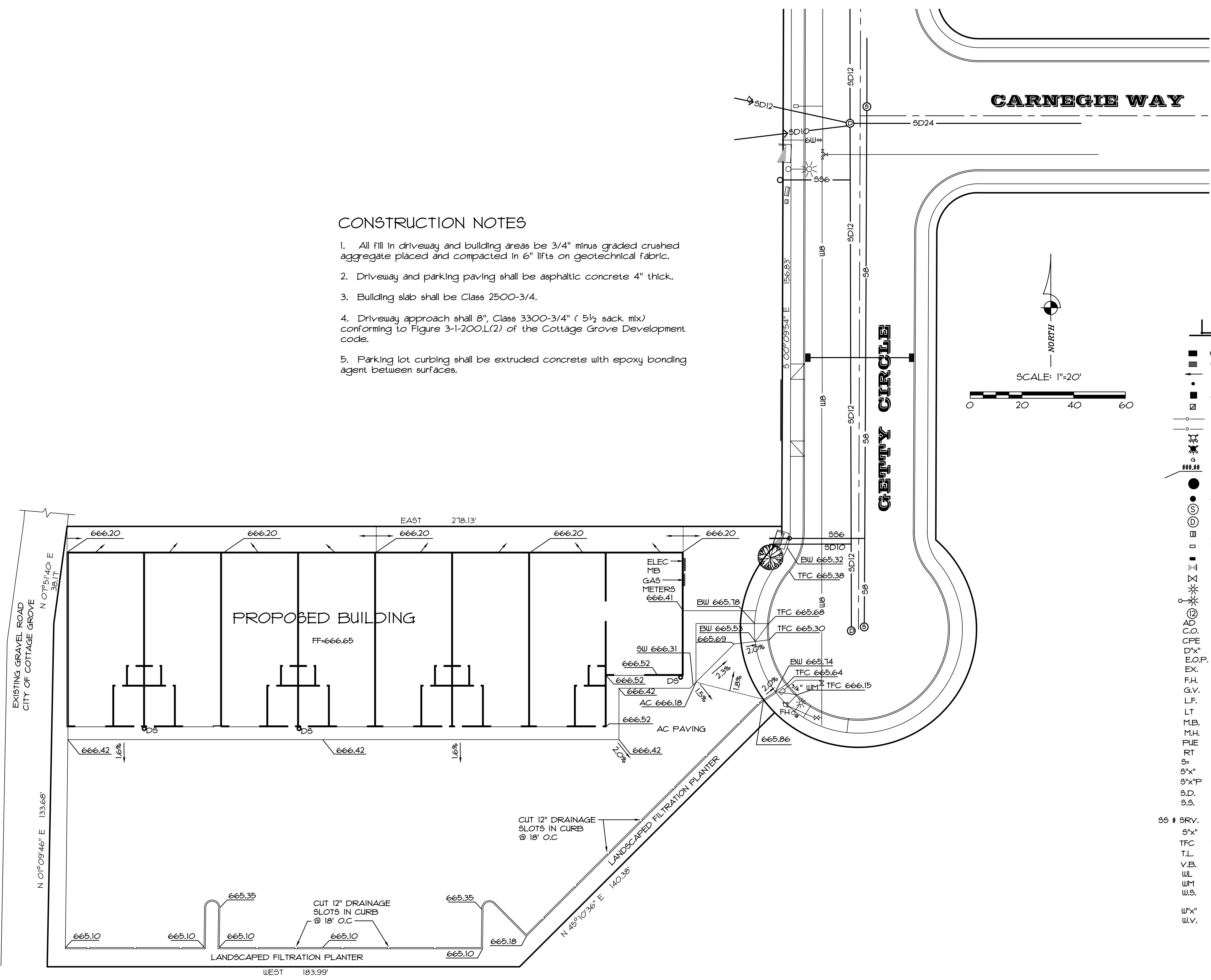
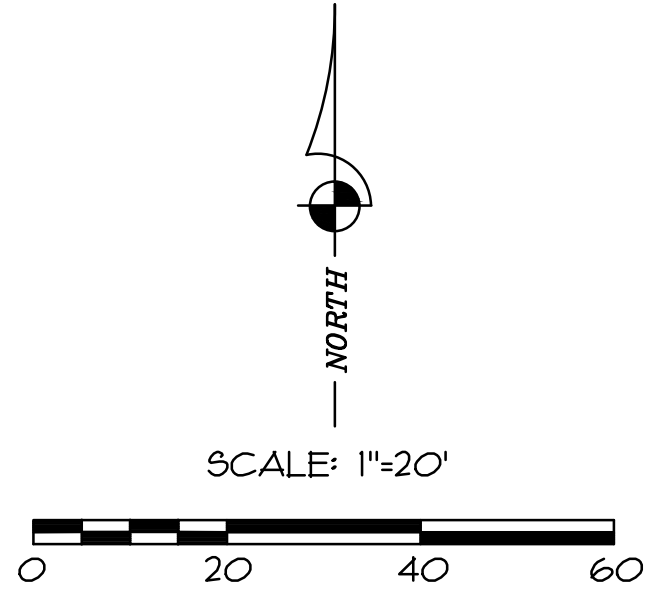


**CONSTRUCTION NOTES**

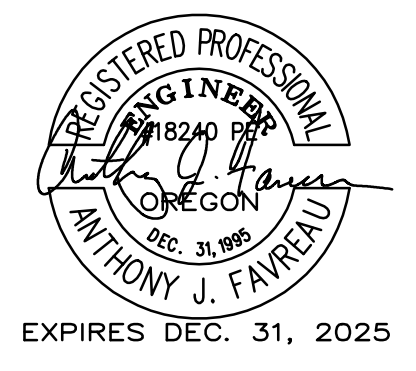
1. All fill in driveway and building areas be 3/4" minus graded crushed aggregate placed and compacted in 6" lifts on geotechnical fabric.
2. Driveway and parking paving shall be asphaltic concrete 4" thick.
3. Building slab shall be Class 2500-3/4.
4. Driveway approach shall be 8", Class 3300-3/4" ( 5 1/2 sack mix) conforming to Figure 3-1-200.L(2) of the Cottage Grove Development code.
5. Parking lot curbing shall be extruded concrete with epoxy bonding agent between surfaces.

**LEGEND**

- CATCH BASIN (NEW)
- CATCH BASIN (EXIST.)
- DRAINAGE DIRECTION
- DOWNSPOUT (NEW)
- AREA DRAIN (NEW)
- ELECTRICAL VAULT (E.V.)
- FENCE (EXIST.)
- FENCE (NEW)
- ⊗ FIRE HYDRANT (EXIST.)
- ⊗ FIRE HYDRANT (NEW)
- ⊗ GAS (EXIST.)
- ### EXISTING OR FINISHED GRADE SPOT ELEVATION
- MANHOLE (NEW)
- STORM DRAIN CLEAN OUT W/ TRAFFIC LID (NEW)
- ⊙ SANITARY MANHOLE (EXIST.)
- ⊙ STORM DRAIN MANHOLE (EXIST.)
- TELEPHONE RISER
- WATER METER BOX (EXIST.)
- WATER METER BOX (NEW)
- WATER VALVE (NEW)
- WATER VALVE (EXIST.)
- ⊗ YARD LIGHT (EXIST.)
- ⊗ STREET LIGHT (EXIST.)
- ⊙ NUMBER OF PARKING SPACES
- AD AREA DRAIN
- C.O. CLEAN OUT
- CPE CORRUGATED POLYETHYLENE
- D"x" STORM DRAIN, X" ⊕ (EXIST.)
- E.O.P. EDGE OF PAVEMENT
- EX. EXISTING
- F.H. FIRE HYDRANT
- G.V. GATE VALVE
- LF. LINEAR FEET
- LT. LEFT
- M.B. METER BOX
- M.H. MAN HOLE
- PUE PUBLIC UTILITY EASEMENT
- RT. RIGHT
- S- SLOPE
- S"x" EXIST. X" ⊕ SANITARY SEWER
- S"x" P EXIST. X" ⊕ PRESSURE SANITARY SEWER
- S.D. STORM DRAIN
- S.S. SAN. SEW.
- #" SANITARY SEWER SERVICE
- W/ C.O.
- S"x" SAN. SEWER MAIN X" ⊕ (EXIST.)
- TFC TOP FACE CURB
- T.L. TRAFFIC LID
- V.B. VALVE BOX
- WL. WATER LINE
- WM. WATER METER
- W.S. WATER SERVICE LINE, CORP. STOP, ANGLE STOP & M.B. SEE DETAIL 408
- W"x" WATER MAIN X" ⊕ (EXIST.)
- W.V. WATER VALVE



**GRADING PLAN**



REVISIONS:


**Geomax** INC.  
 ENGINEERING, LAND SURVEYING, BUILDING DESIGN  
 806 N. NINTH STREET, COTTAGE GROVE, OREGON 97024  
 TELEPHONE: (541) 942-0706 FAX: (541) 942-1995

**THE FAVREAU GROUP**

PROJECT TITLE:  
**NEW RENTAL SHOPS  
 MALK II  
 COTTAGE GROVE, OR**

SHEET TITLE:  
**GRADING PLAN**

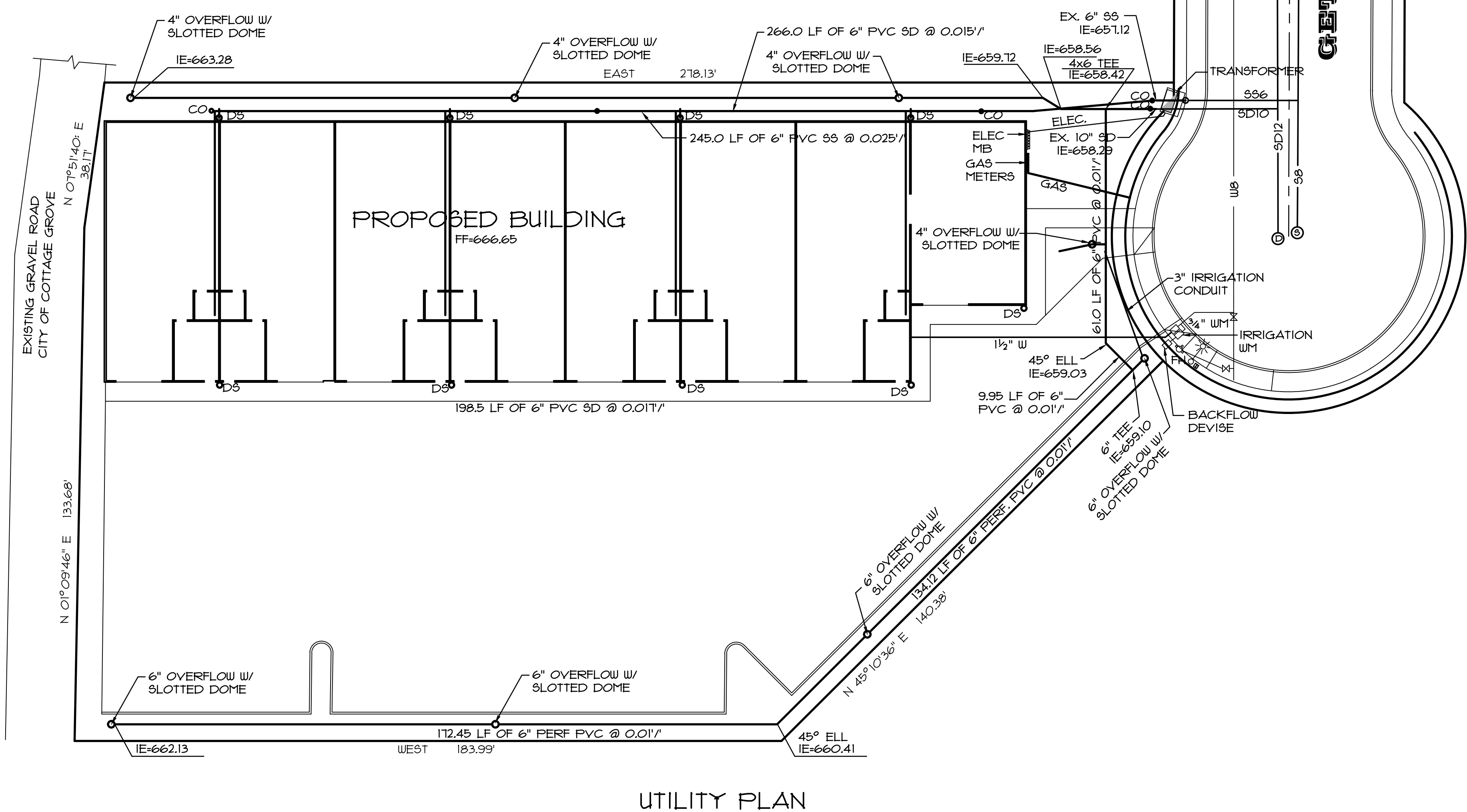
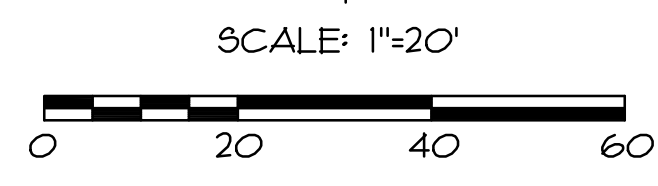
DATE	5/10/22
DESIGNER	R.L.C.
CHECKED BY	A.J.F.
FILE NO.	WO62C1.DWG
PROJECT NO.	<b>W062</b>
SHEET NO.	<b>CE 3</b>

**CONSTRUCTION NOTES**

- All fill in driveway and building areas be 3/4" minus graded crushed aggregate placed and compacted in 6" lifts.
- Storm drains and sanitary sewer drains shall be schedule 30-34 PVC.
- Catch basins in paved areas shall be Gibson 24"x24"x30 Model GCBIO-30HB-6.
- Catch basins in grass areas shall be Gibson 18"x18"x21" Model GCBIO-1821HB-4.
- Driveway and parking paving shall be asphaltic concrete 4" thick.
- Building slab shall be Class 2500-3/4.
- Driveway approach shall be 8", Class 3300-3/4" ( 5 1/2 sack mix) conforming to Figure 3-1-200.L(2) of the Cottage Grove Development code.
- Parking lot curbing shall be extruded concrete with epoxy bonding agent between surfaces.
- Cleanouts in paved areas shall have traffic lids.

**LEGEND**

- CATCH BASIN (NEW)
- ▣ CATCH BASIN (EXIST.)
- DRAINAGE DIRECTION
- DOWNSPOUT (NEW)
- AREA DRAIN (NEW)
- ELECTRICAL VAULT (E.V.)
- FENCE (EXIST.)
- FENCE (NEW)
- ⊙ FIRE HYDRANT (EXIST.)
- ⊙ FIRE HYDRANT (NEW)
- ⊙ GAS (EXIST.)
- ### EXISTING OR FINISHED GRADE SPOT ELEVATION
- MANHOLE (NEW)
- ⊙ STORM DRAIN CLEAN OUT W/ TRAFFIC LID (NEW)
- ⊙ SANITARY MANHOLE (EXIST.)
- ⊙ STORM DRAIN MANHOLE (EXIST.)
- TELEPHONE RISER
- WATER METER BOX (EXIST.)
- WATER METER BOX (NEW)
- WATER VALVE (NEW)
- WATER VALVE (EXIST.)
- ⊙ YARD LIGHT (EXIST.)
- ⊙ STREET LIGHT (EXIST.)
- ⊙ NUMBER OF PARKING SPACES
- AD AREA DRAIN
- C.O. CLEAN OUT
- CPE CORRUGATED POLYETHYLENE
- D"x" STORM DRAIN, X" ⊙ (EXIST.)
- E.O.P. EDGE OF PAVEMENT
- EX. EXISTING
- F.H. FIRE HYDRANT
- G.V. GATE VALVE
- LF. LINEAR FEET
- LT LEFT
- M.B. METER BOX
- M.H. MAN HOLE
- P.U.E. PUBLIC UTILITY EASEMENT
- RT RIGHT
- S- SLOPE
- S"x" EXIST. X" ⊙ SANITARY SEWER
- S"x"P EXIST. X" ⊙ PRESSURE SANITARY SEWER
- S.D. STORM DRAIN
- S.S. SAN. SEW.
- #" SANITARY SEWER SERVICE
- W/ C.O.
- S"x" SAN. SEWER MAIN X" ⊙ (EXIST.)
- TFC TOP FACE CURB
- T.L. TRAFFIC LID
- V.B. VALVE BOX
- WL WATER LINE
- WM WATER METER
- W.S. WATER SERVICE LINE, CORP. STOP, ANGLE STOP & M.B. SEE DETAIL 40B
- W"x" WATER MAIN X" ⊙ (EXIST.)
- W.V. WATER VALVE



**UTILITY PLAN**

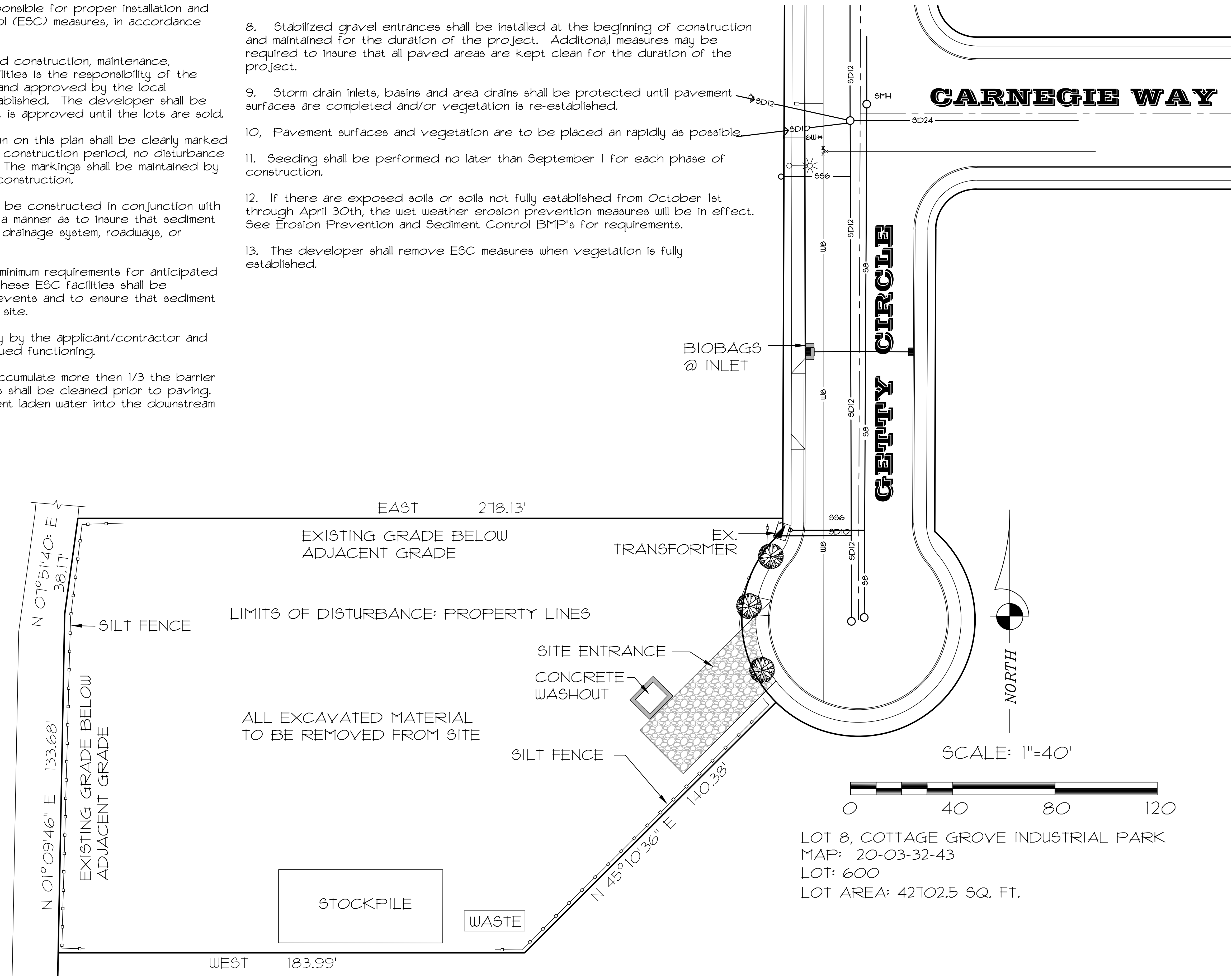


REVISIONS:	
<b>Geomax</b> INC.	ENGINEERING, LAND SURVEYING, BUILDING DESIGN 806 N. NINTH STREET, COTTAGE GROVE, OREGON 97024 TELEPHONE: (503) 942-0706 FAX: (503) 942-1995
<b>THE FAVREAU GROUP</b>	
<b>NEW RENTAL SHOPS MALK II COTTAGE GROVE, OR</b>	<b>UTILITY PLAN</b>
PROJECT TITLE:	
SHEET TITLE:	
DATE	5/10/22
DESIGNER	R.L.C.
CHECKED BY	A.J.F.
FILE NO.	W062C1.DWG
PROJECT NO.	
	<b>W062</b>
SHEET NO.	<b>CE 4</b>

# EROSION CONTROL NOTES

1. Owner or designated person shall be responsible for proper installation and maintenance of all erosion and sediment control (ESC) measures, in accordance with local, State and Federal regulation.
2. The implementation of these ESC plans and construction, maintenance, replacement and upgrading of these ESC facilities is the responsibility of the contractor until all construction is completed and approved by the local jurisdiction and vegetation/landscaping is established. The developer shall be responsible for maintenance after the project is approved until the lots are sold.
3. The boundaries of the clearing limits shown on this plan shall be clearly marked in the field prior to construction. During the construction period, no disturbance beyond the clearing limits shall be permitted. The markings shall be maintained by the applicant/contractor for the duration of construction.
4. The ESC facilities shown on this plan must be constructed in conjunction with all clearing and grading activities, and in such a manner as to insure that sediment and sediment laden water does not enter the drainage system, roadways, or violate applicable water standards.
5. The ESC facilities shown on this plan are minimum requirements for anticipated site conditions. During construction period, these ESC facilities shall be upgraded as needed for unexpected storm events and to ensure that sediment and sediment laden water does not leave the site.
6. The ESC facilities shall be inspected daily by the applicant/contractor and maintained as necessary to ensure their continued functioning.
7. At no time shall sediment be allowed to accumulate more than 1/3 the barrier height. All catch basins and conveyance lines shall be cleaned prior to paving. The cleaning operations shall not flush sediment laden water into the downstream system.

8. Stabilized gravel entrances shall be installed at the beginning of construction and maintained for the duration of the project. Additional measures may be required to insure that all paved areas are kept clean for the duration of the project.
9. Storm drain inlets, basins and area drains shall be protected until pavement surfaces are completed and/or vegetation is re-established.
10. Pavement surfaces and vegetation are to be placed as rapidly as possible.
11. Seeding shall be performed no later than September 1 for each phase of construction.
12. If there are exposed soils or soils not fully established from October 1st through April 30th, the wet weather erosion prevention measures will be in effect. See Erosion Prevention and Sediment Control BMP's for requirements.
13. The developer shall remove ESC measures when vegetation is fully established.



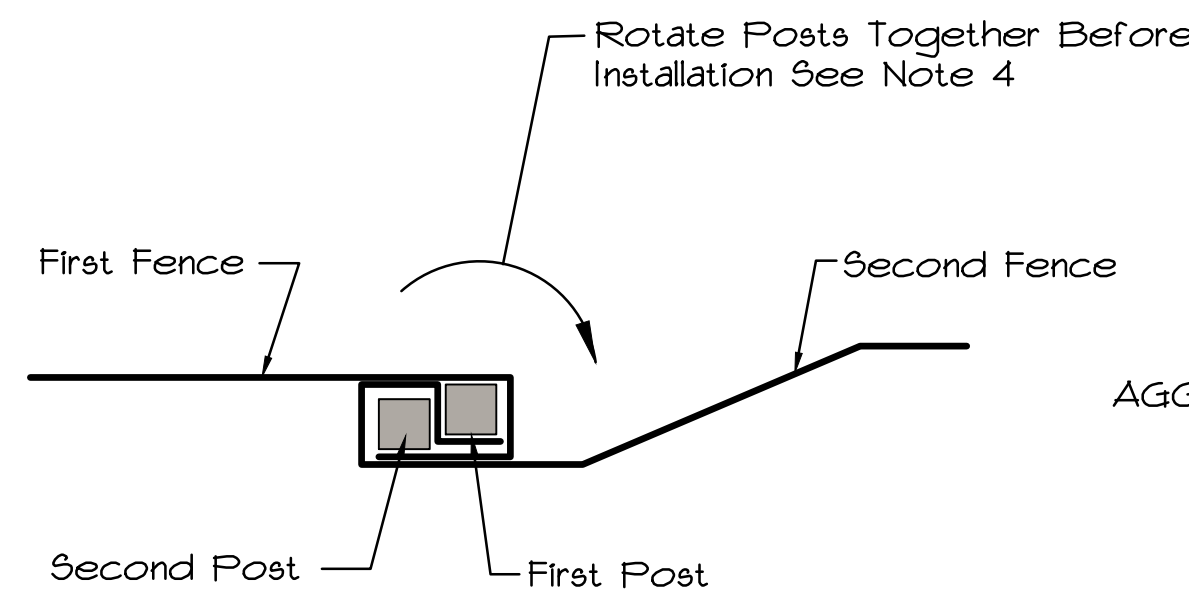
LOT 8, COTTAGE GROVE INDUSTRIAL PARK  
 MAP: 20-03-32-43  
 LOT: 600  
 LOT AREA: 42702.5 SQ. FT.

NO.	DESCRIPTION

**Geomax** INC.  
 BUILDING DESIGN  
 806 N NINTH STREET, COTTAGE GROVE, OREGON 97124  
 TELEPHONE: (503) 342-0126 EMAIL: geomax@geomax.com

PROJECT TITLE: **NEW RENTAL SHOPS  
 MALK II  
 COTTAGE GROVE, OR**  
 SHEET TITLE: **EROSION & SEDIMENT CONTROL PLAN**

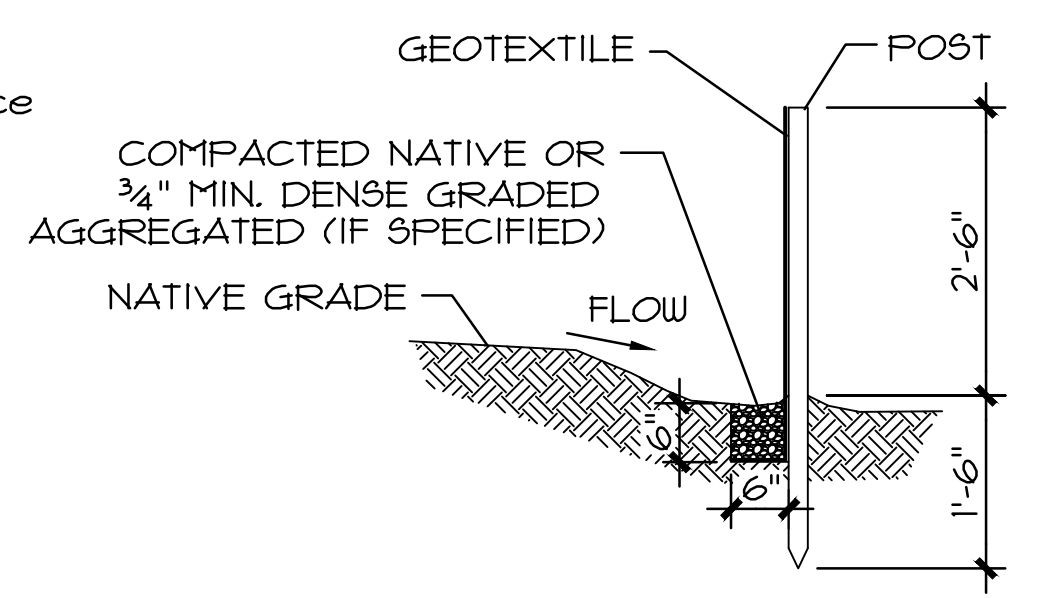
DATE: 5/25/22  
 DESIGNER: R.L.C.  
 CHECKED BY: R.L.C.  
 FILE NO.: W062ESCP.DWG  
 PROJECT NO.: **W062**  
 SHEET NO.: **EP 1**



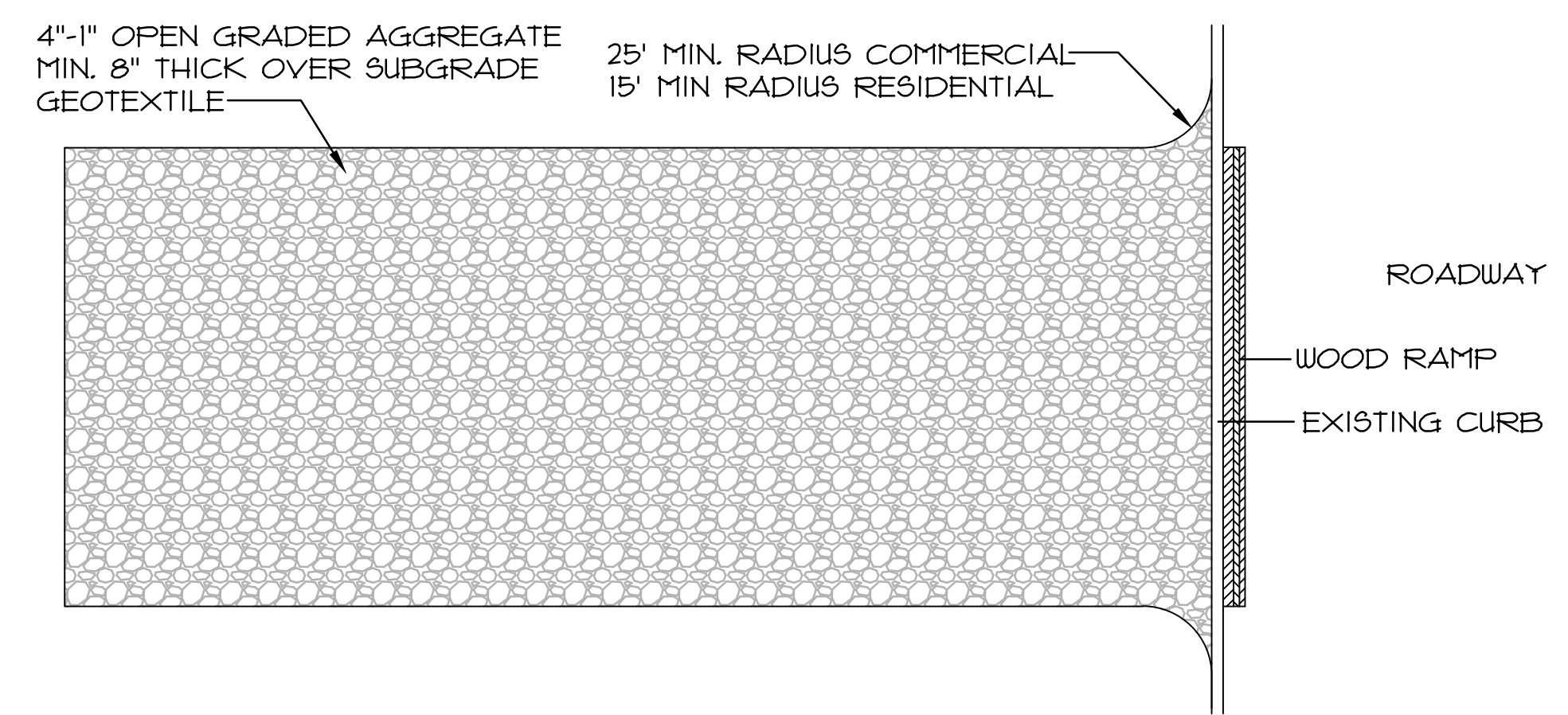
**SPlice DETAIL**

**NOTES:**

1. USE 2"x2" WOOD FENCE POSTS
2. POSTS TO BE INSTALLED ON DOWNHILL SIDE OF SEDIMENT FENCE. POSITION POSTS TO PREVENT SEPARATION FROM GEOTEXTILE
3. COMPACT FILTER FABRIC TRENCH BACKFILL AND SOIL ON UPHILL SIDE OF FENCE.
4. LOCATE FENCE NO CLOSER THAN THREE FEET TO THE TOE OF SLOPE.
5. WHEN SPLICES ARE NECESSARY MAKE SPLICE AT POST ACCORDING TO SPLICE DETAIL. PLACE THE END POST OF THE SECOND FENCE INSIDE THE END POST OF THE FIRST FENCE. ROTATE BOTH POSTS TOGETHER AT LEAST 180° TO CREATE A TIGHT SEAL WITH THE FABRIC MATERIAL.

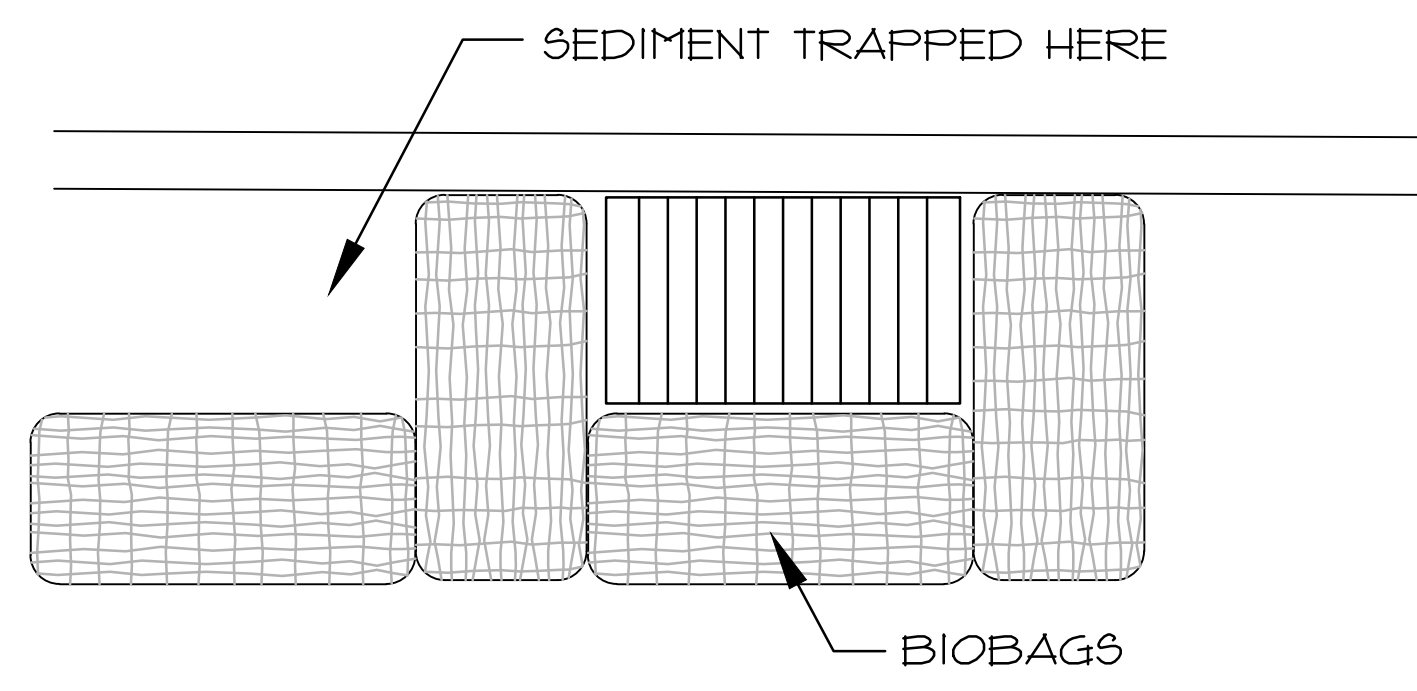


**SEDIMENT FENCE DETAIL**

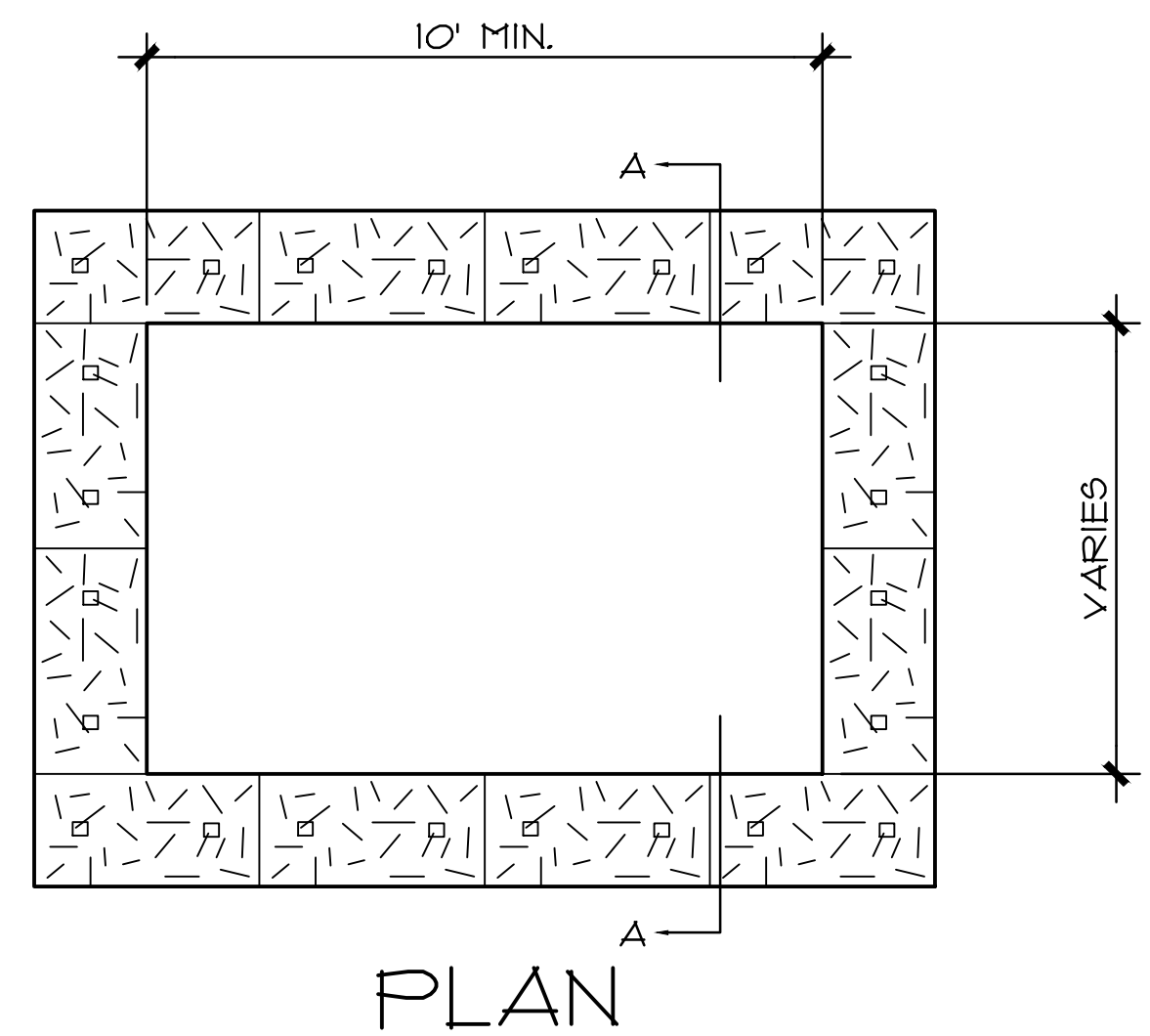


**CONSTRUCTION ENTRANCE**

CONSTRUCTION ENTRANCE TABLE MINIMUM LENGTH	
LENGTH (FT)	AREA OF EXPOSED SOIL (AC)
20	0.25
50	0.25 < A < 1.0
100	A > 1.0

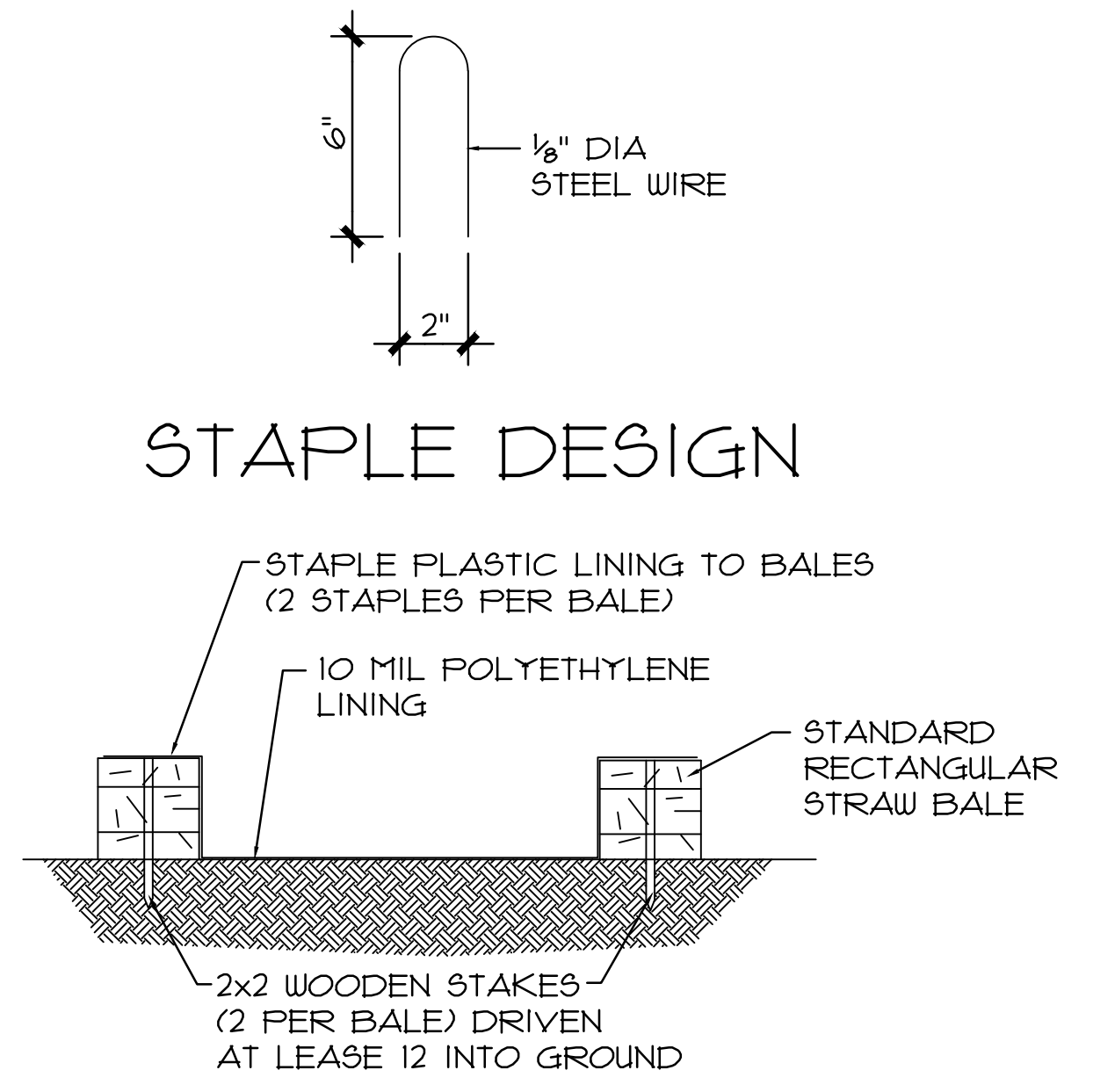


**CATCH BASIN/CURB INLET**



**CONCRETE WASH OUT**

NOTE: VINYL WASHOUT PIT WITH FILTER BAG IS ACCEPTABLE ALTERNATE



**STAPLE DESIGN**

**SECTION A-A**

REVISIONS:


**Geomax** INC.  
 BUILDING DESIGN  
 806 N NINTH STREET, COTTAGE GROVE, OREGON 97124  
 TELEPHONE: (503) 942-0126 EMAIL: geomax@geomax.com

PROJECT TITLE: **NEW RENTAL SHOPS  
MALK II  
COTTAGE GROVE, OR**

SHEET TITLE: **EROSION & SEDIMENT CONTROL PLAN**

DATE: 5/10/22  
 DESIGNER: R.L.C.  
 CHECKED BY: R.L.C.  
 FILE NO.: W062ESCP.DWG  
 PROJECT NO.: **W062**

SHEET NO.: **EP 2**