Schematic Design
Manufacturing Buildings

ARCHITECTURAL

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G002	SURVEY
G003	OUTLINE SPECIFICATIONS (TO FOLLOW)
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CIVIL

C000	COVER SHEET
C001	CONSTRUCTION NOTES
C002	MASTER LEGEND
C100	EXISTING CONDITIONS PLAN
C200	OVERALL SOUTHERN INFLUENCE SITE PLAN
C300	GRADING PLAN
C400	STREET AND STORM DRAINAGE
C500	WATER AND SANITARY SEWER PLAN
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LANDSCAPE

L100	ZONE A - SOUTHERN INFLUENCE AREA PLANTING PLAN
L200	PHASE 1 ENLARGED PLANTING PLAN
L300	PLANTING DETAILS

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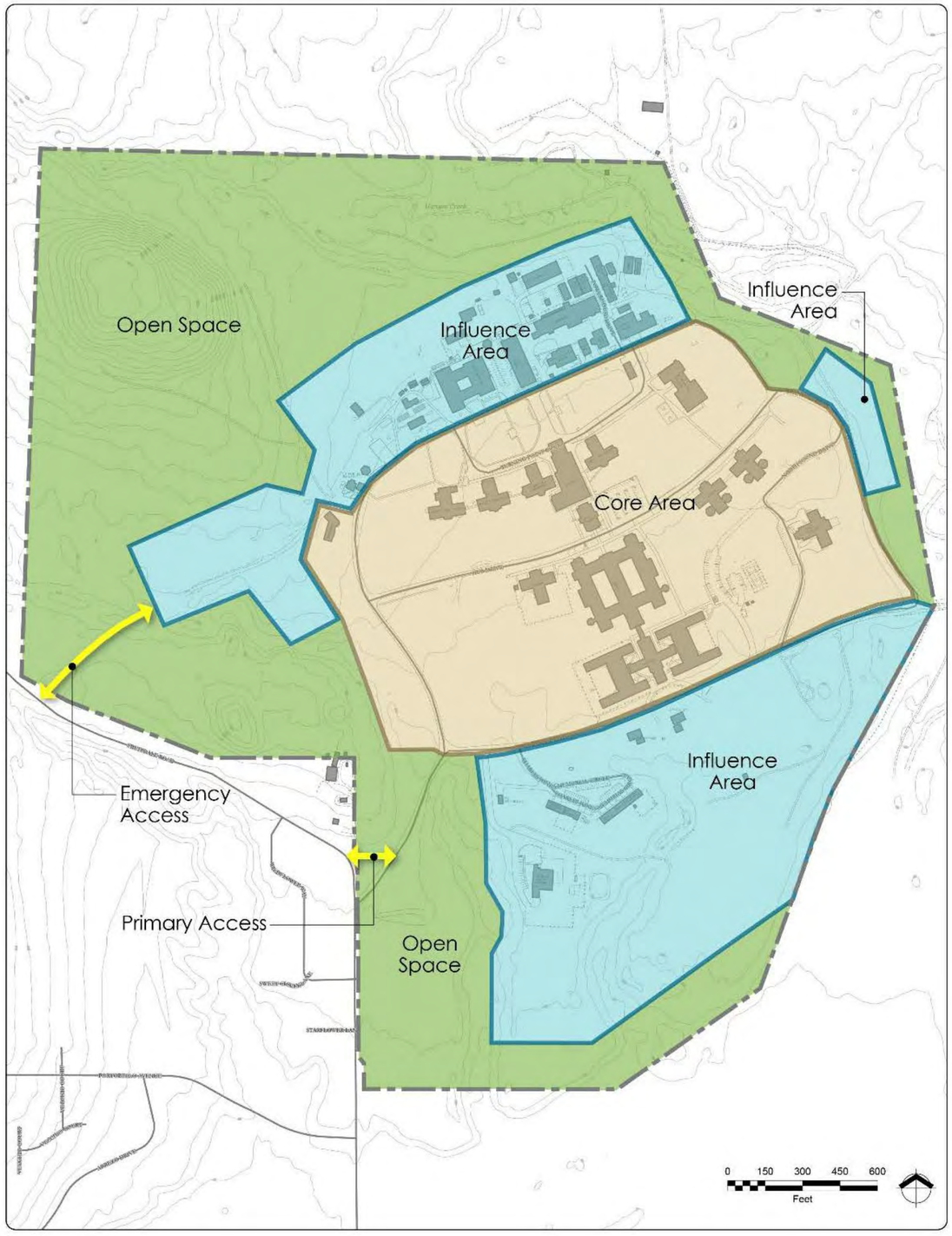
Port of Skagit



2 Existing Campus Plan

1 Proposed Campus Plan

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CAMPUS PLANS

G001

1 Survey
1" = 80'-0"

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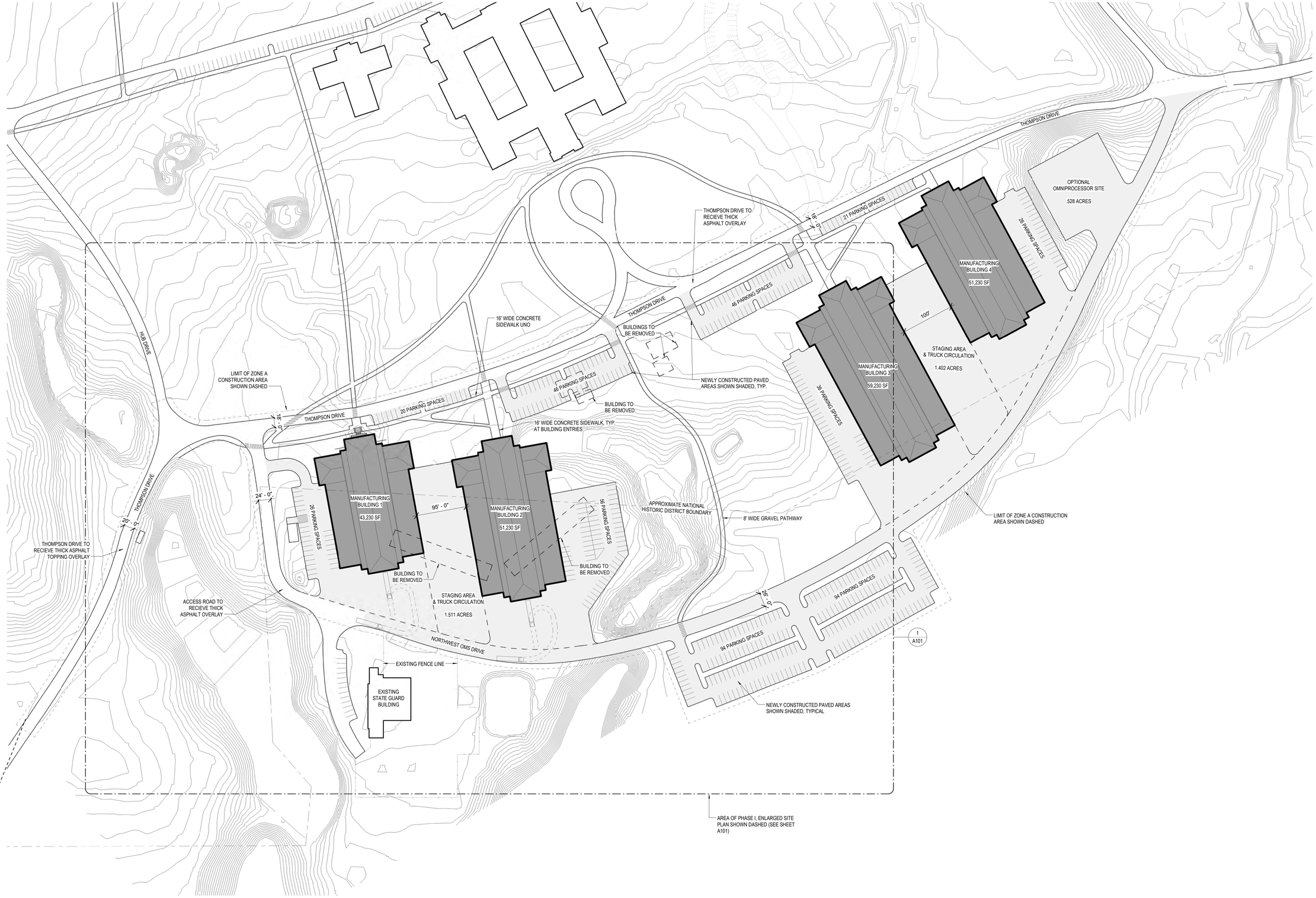
SURVEY

G002



1 Zone A - Southern Influence Area

1" = 80'-0"

0 20' 40' 80' 160'

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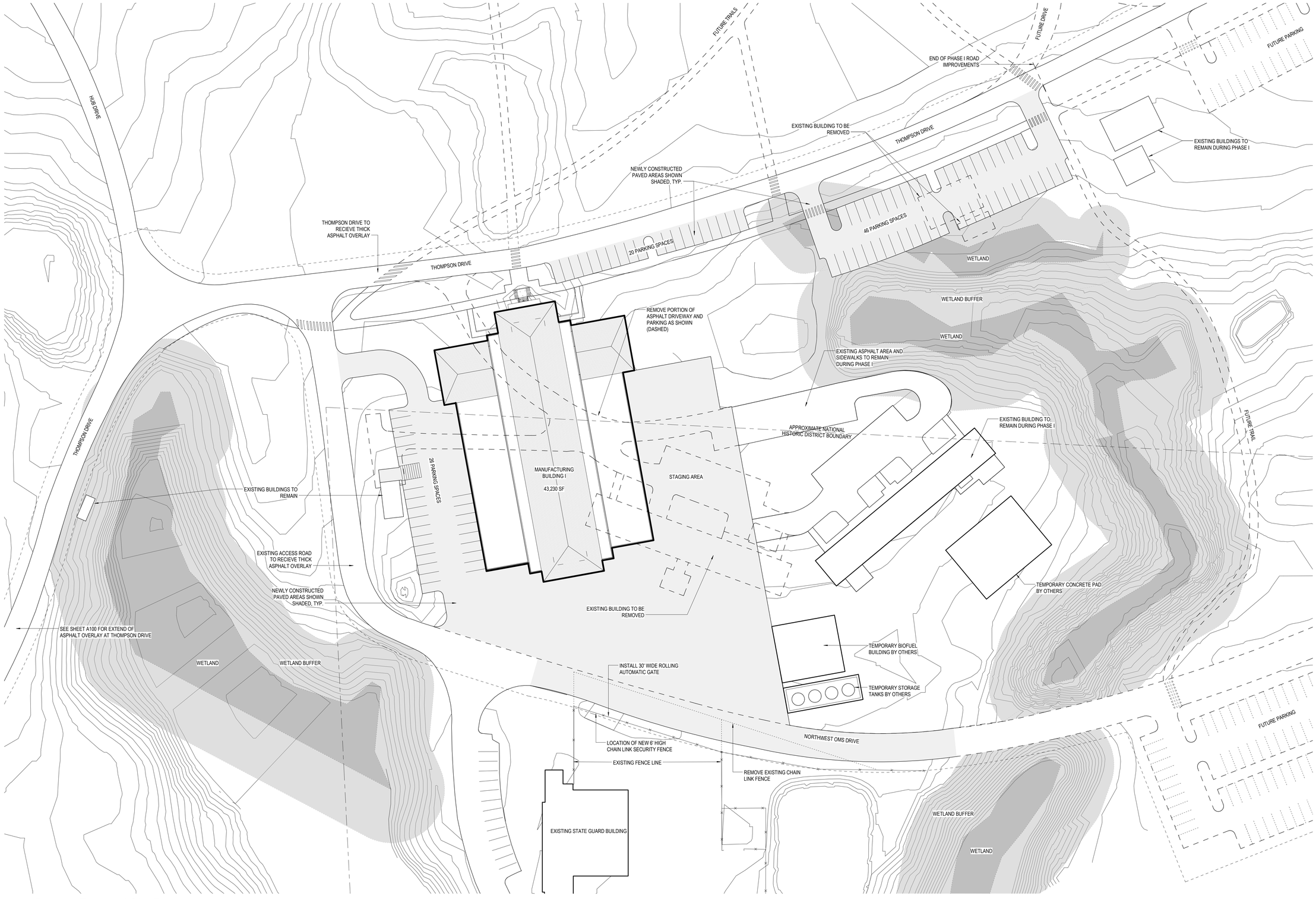
ZONE A - SOUTHERN INFLUENCE AREA

A100



1 Phase I Enlarged Site Plan

1" = 40'-0"

0 20' 50' 100' 200'

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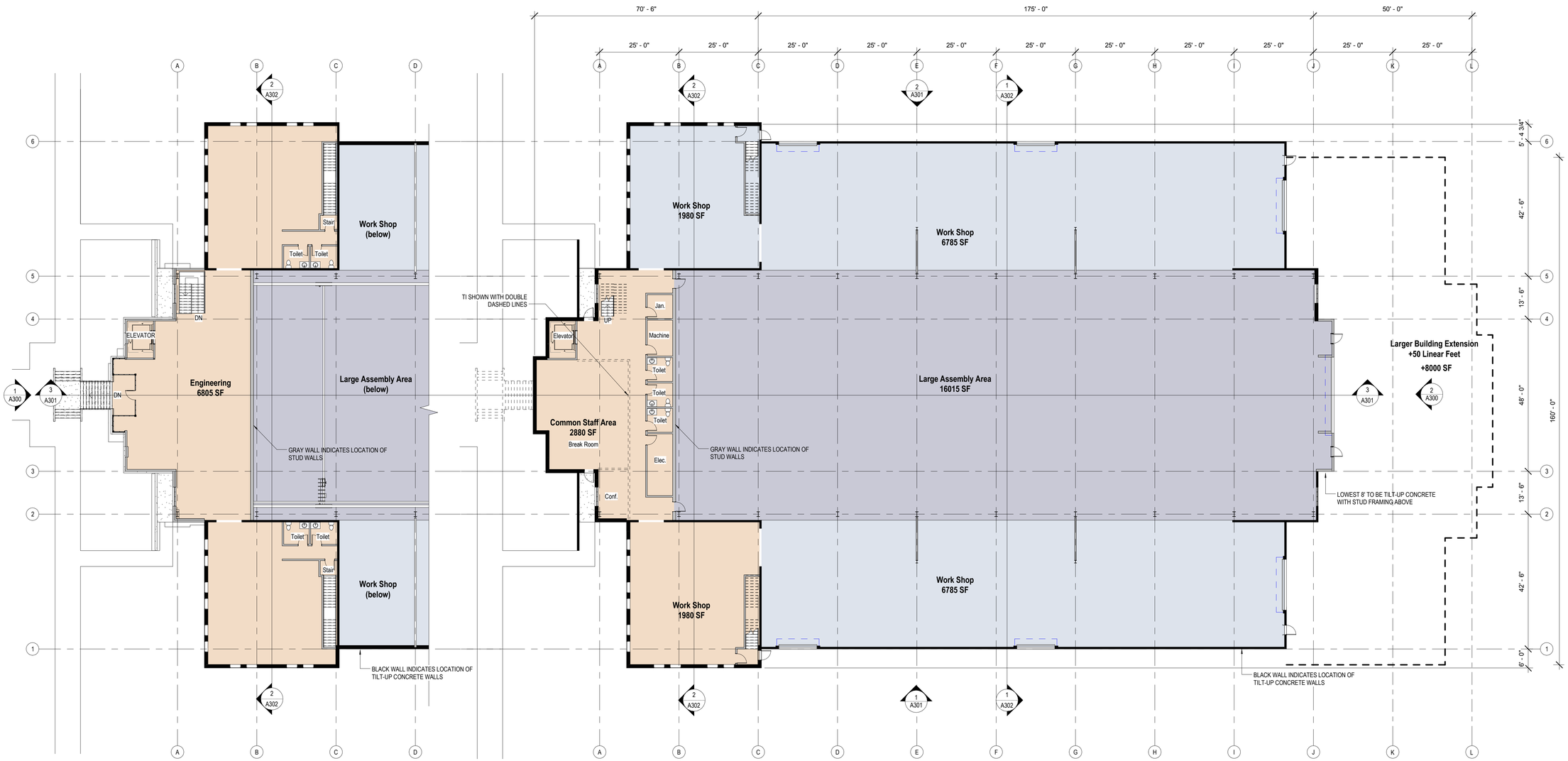
PHASE 1 ENLARGED SITE PLAN

A101



2 Upper Level
1/16" = 1'-0"

1 Main Level
1/16" = 1'-0"

N

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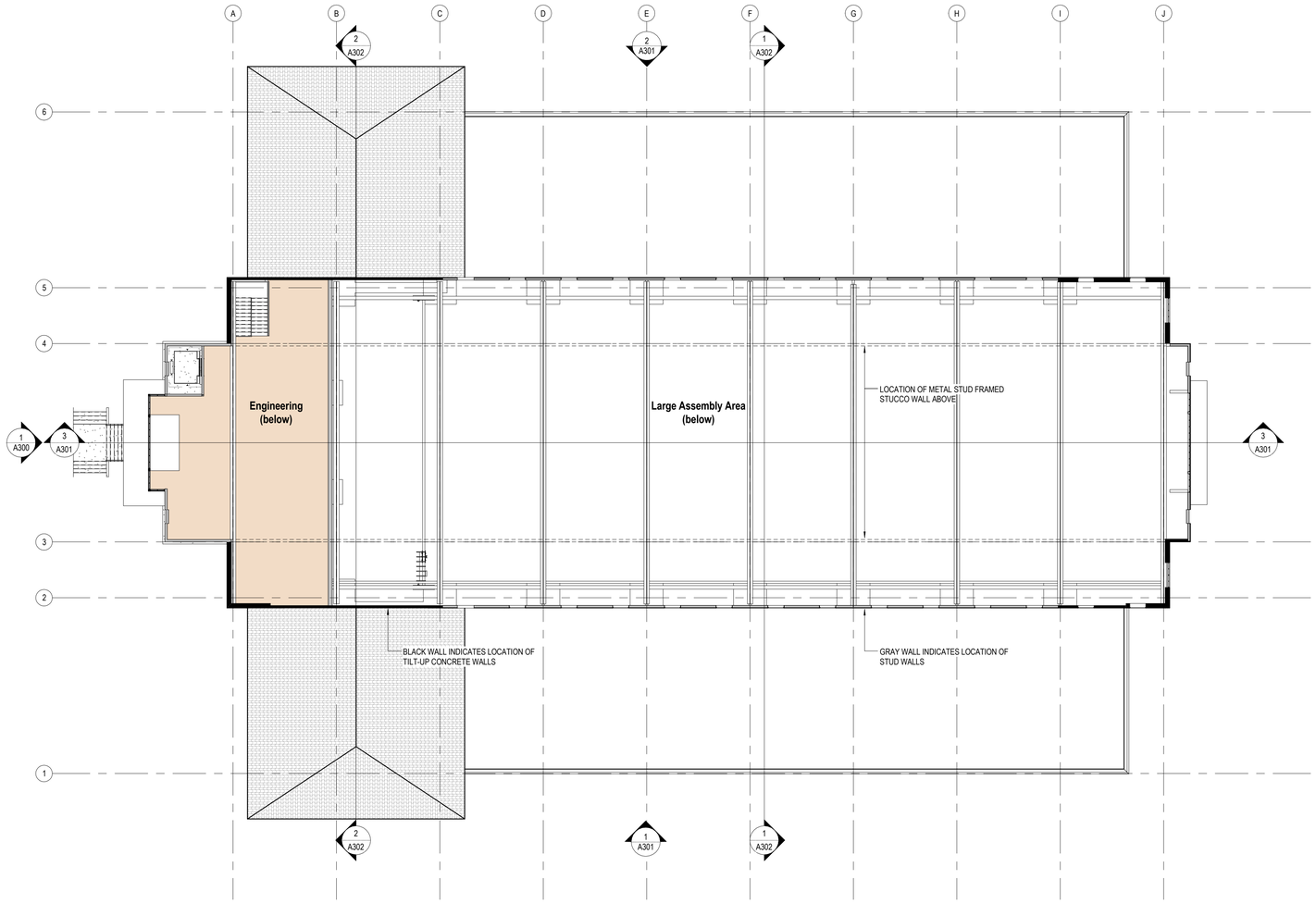
FLOOR PLANS

A200



1 Clerestory Plan

1/16" = 1'-0"

N

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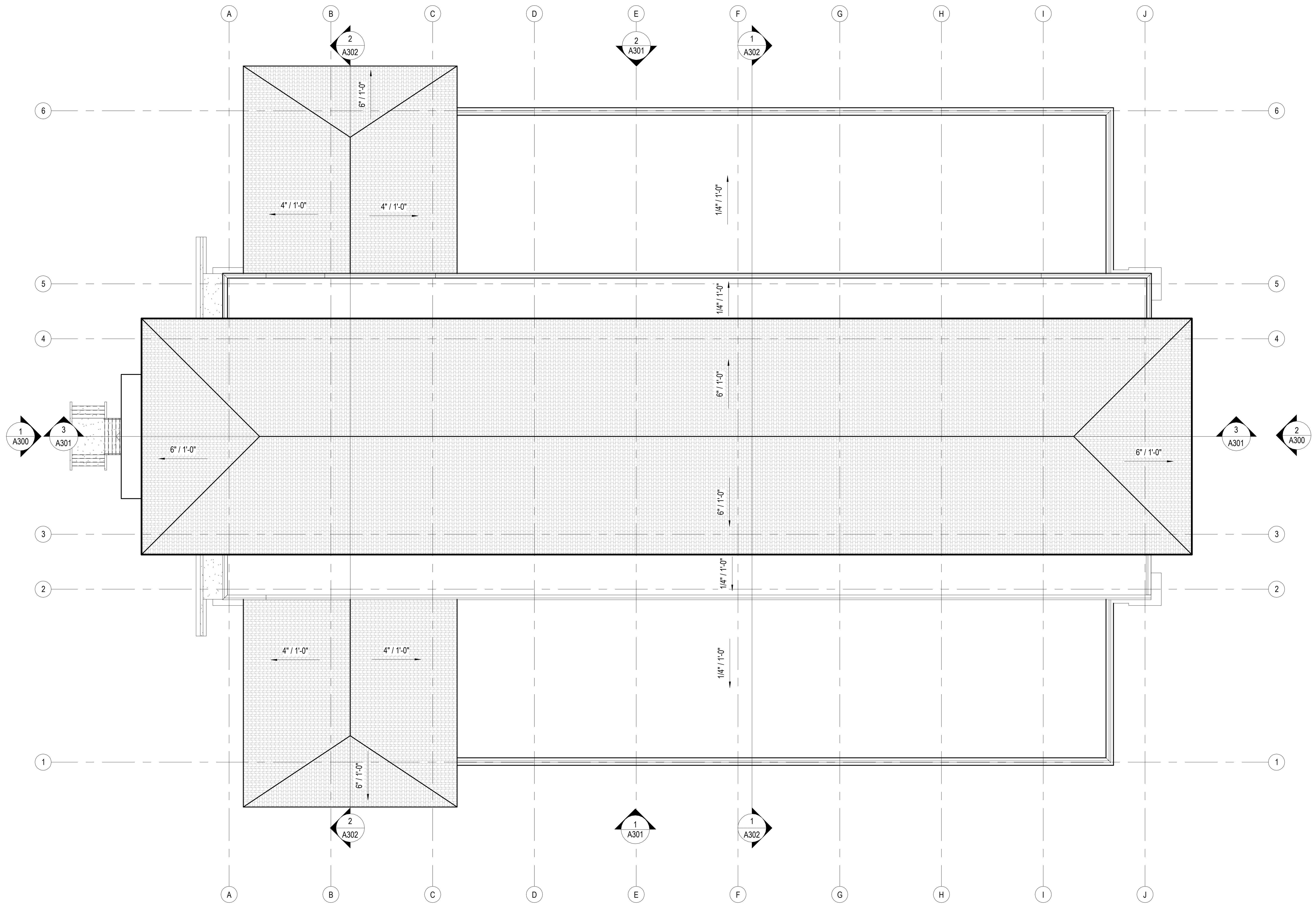
CLERESTORY PLAN

A201



1 Roof Plan
1/16" = 1'-0"

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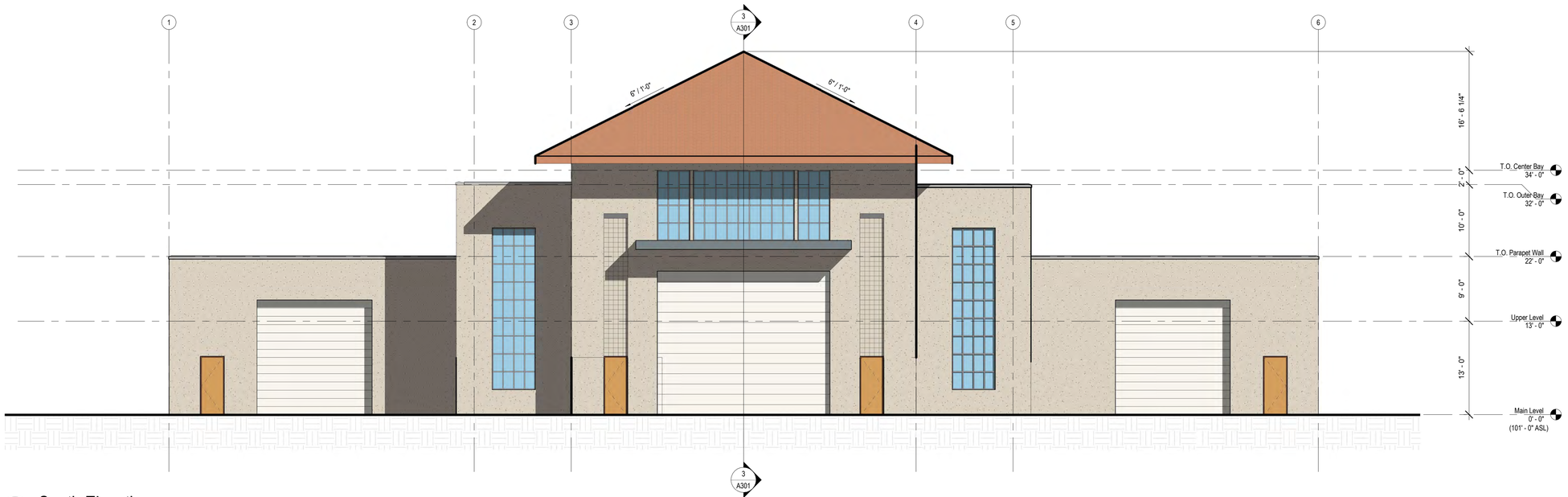
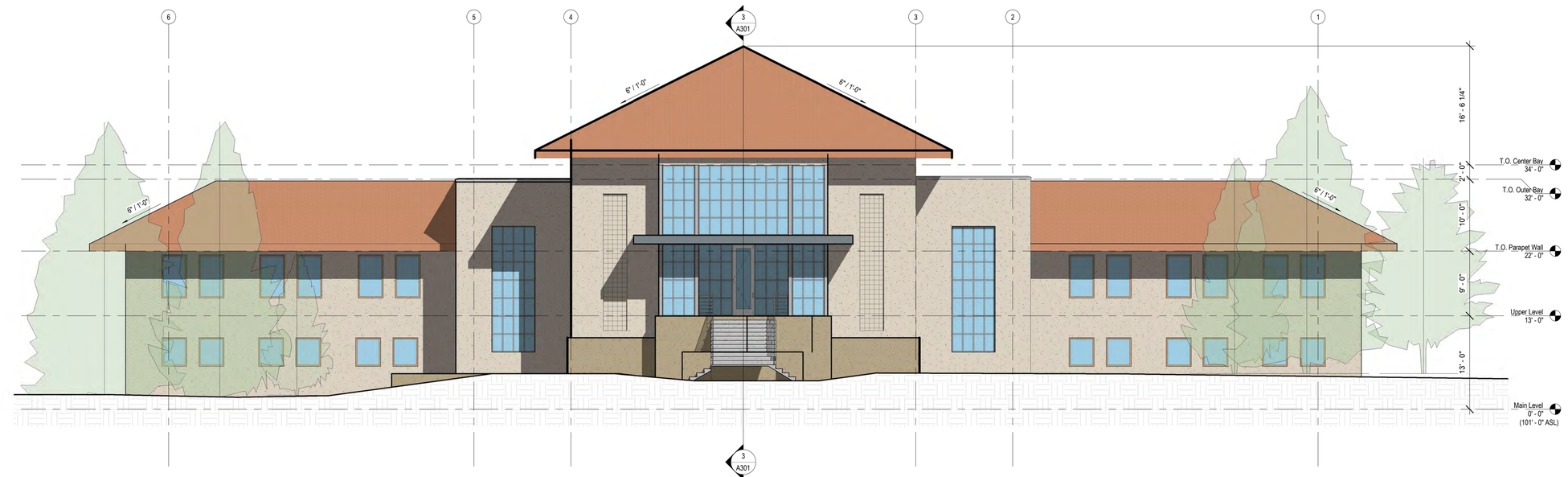
ROOF PLAN

A202



2 South Elevation

1/8" = 1'-0"



1 North Elevation

1/8" = 1'-0"

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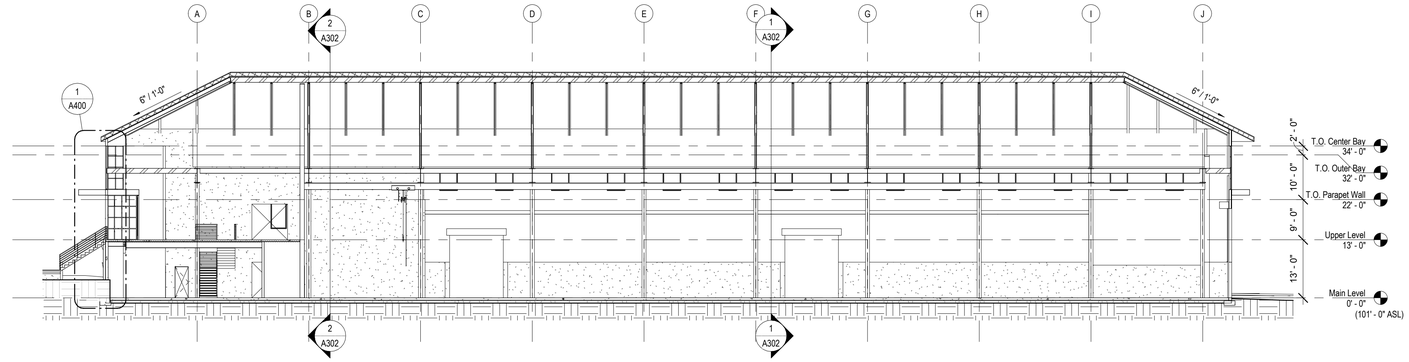
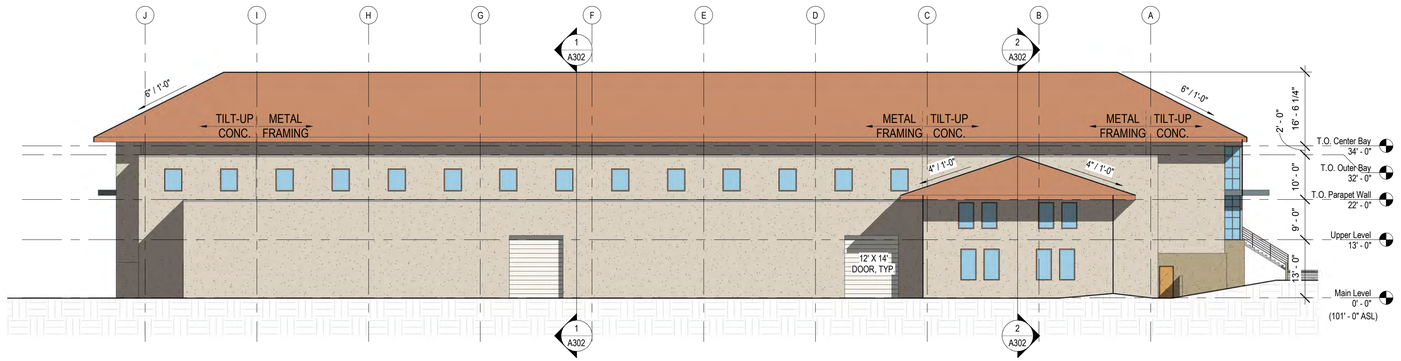
BUILDING ELEVATIONS

A300



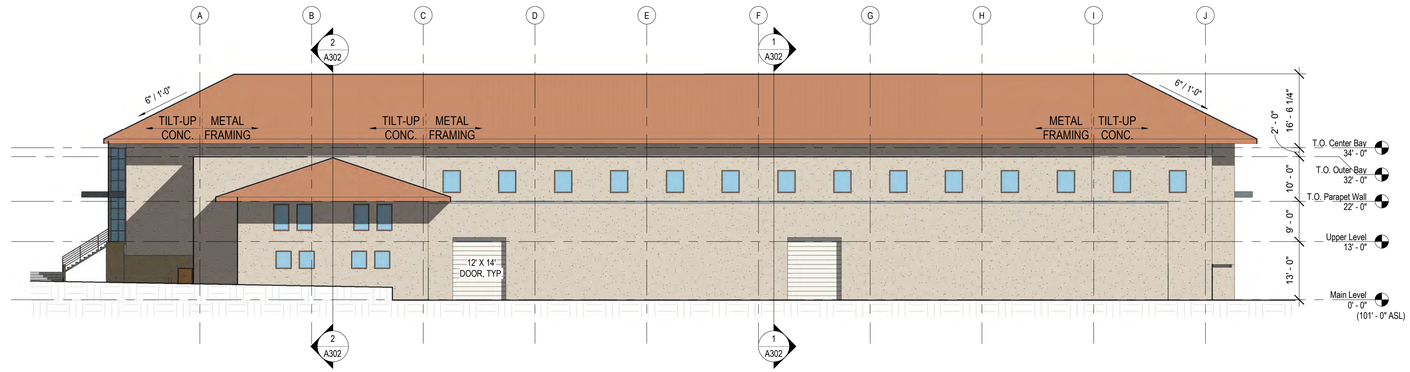
3 Longitudinal Section

1/16" = 1'-0"



2 East Elevation

1/16" = 1'-0"



1 West Elevation

1/16" = 1'-0"

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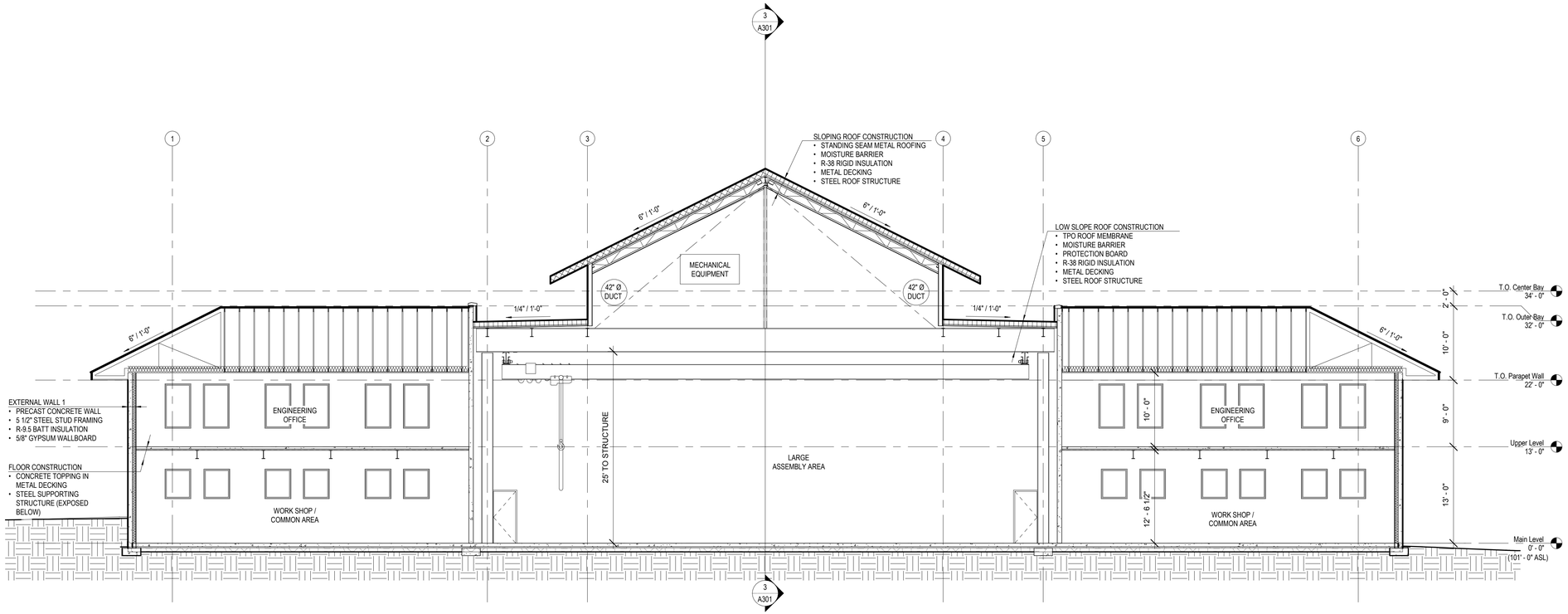
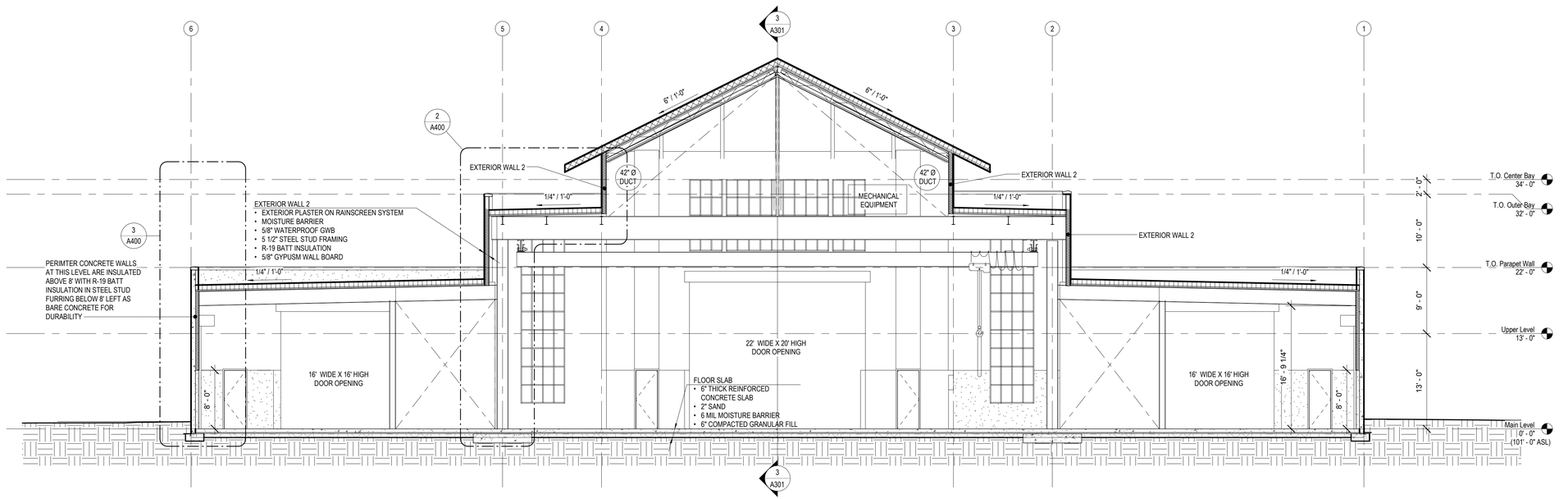
BUILDING ELEVATIONS

A301



2 Cross Section @ Offices

1/8" = 1'-0"



1 Cross Section @ Manufacturing Bay

1/8" = 1'-0"

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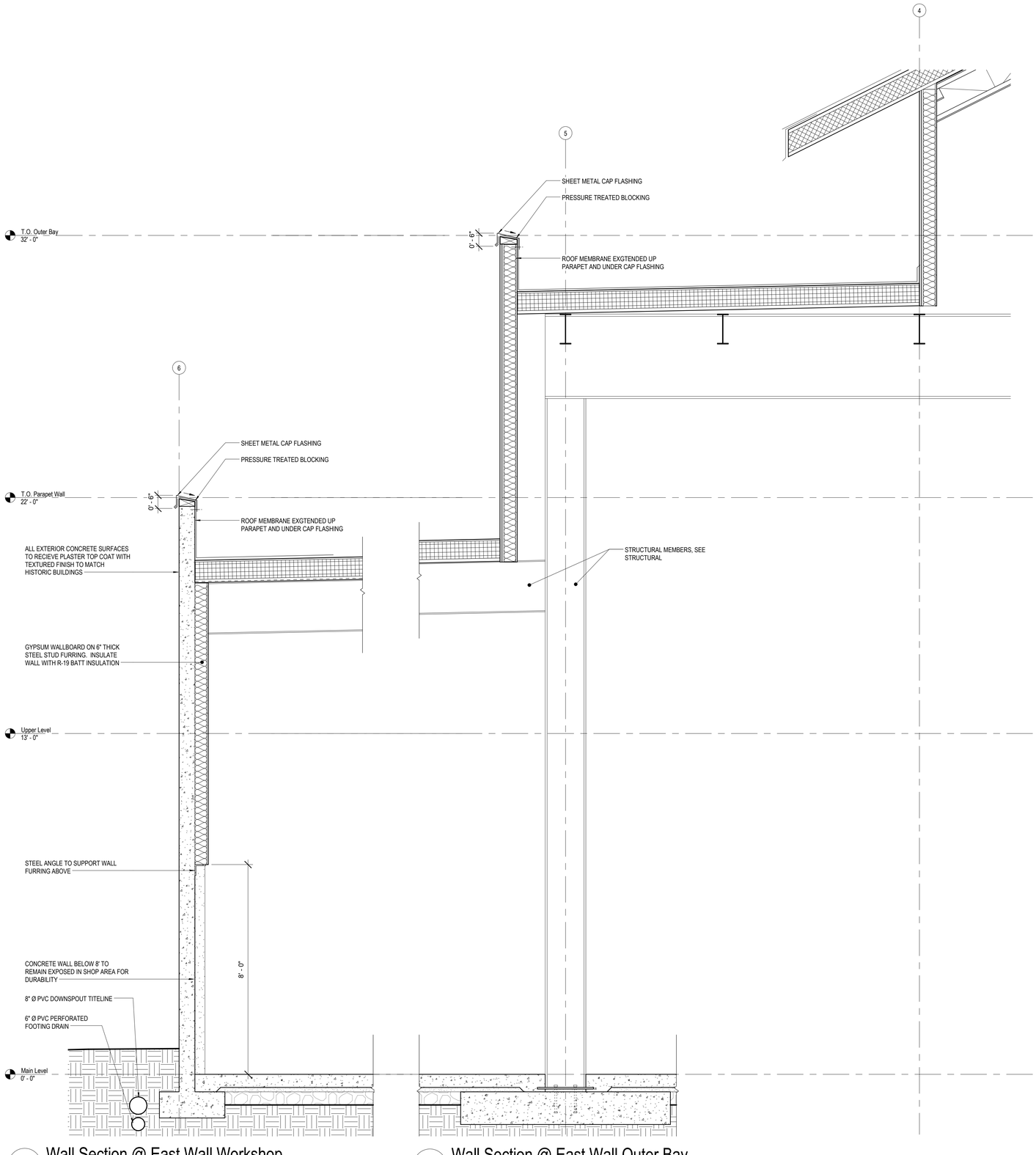
BUILDING SECTIONS

A302



3 Wall Section @ East Wall Workshop
1/2" = 1'-0"

2 Wall Section @ East Wall Outer Bay
1/2" = 1'-0"

1 Wall Section @ North Wall
1/2" = 1'-0"

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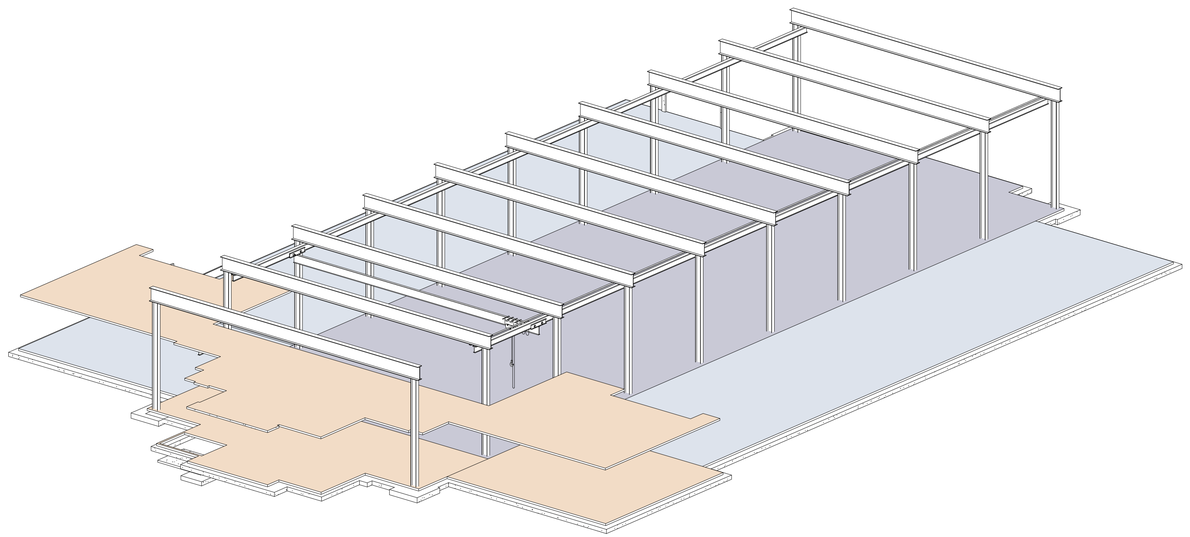
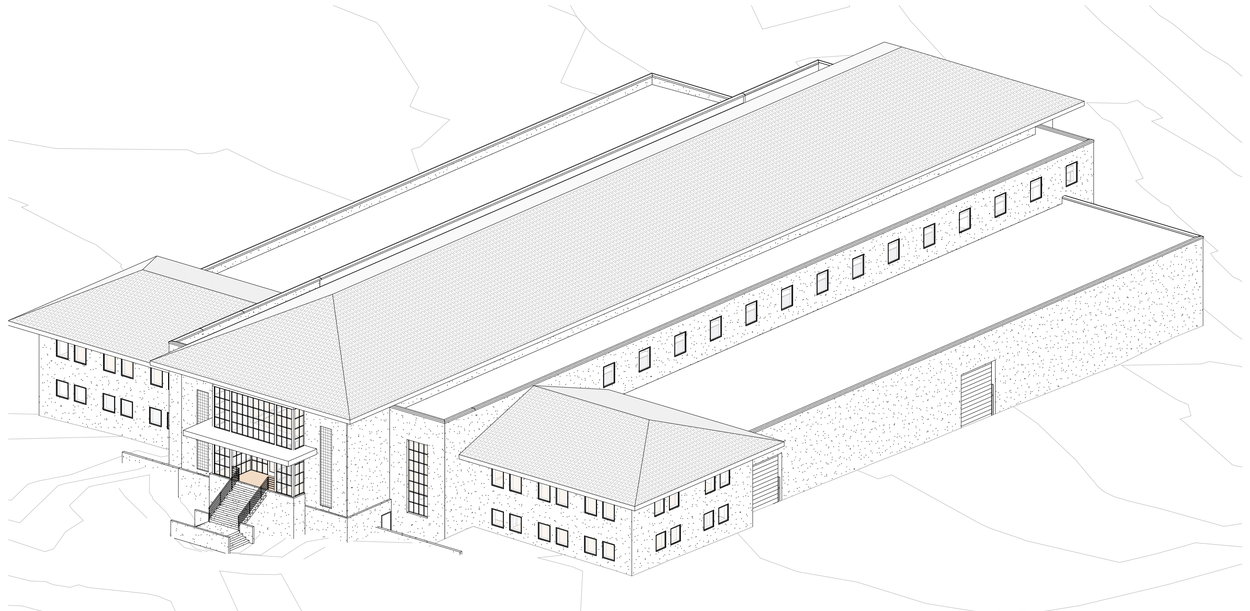
WALL SECTIONS

A400



4 Steel Frame Perspective



1 Perspective Image

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PERSPECTIVE IMAGES

A401

General Structural Notes

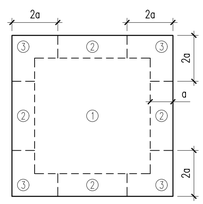
THE FOLLOWING APPLY UNLESS SHOWN OTHERWISE ON THE DRAWINGS

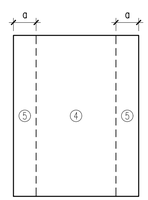
CRITERIA

1. ALL MATERIALS, WORKMANSHIP, DESIGN, AND CONSTRUCTION SHALL CONFORM TO THE DRAWINGS, SPECIFICATIONS, AND THE INTERNATIONAL BUILDING CODE (2015 EDITION).

2. DESIGN LOADING CRITERIA:
   HANDRAILS AND GUARDS
   GUARDRAILS/BALCONY RAILS . . . . . 50 PLF
   GUARDRAILS/BALCONY RAILS CONCENTRATED LOAD . . . . . 200 LBS
   OFFICES
   FLOOR LIVE LOAD . . . . . 50 PSF
   FLOOR LIVE LOAD (CORRIDORS ABOVE FIRST FLOOR) . . . . . 80 PSF
   FLOOR LIVE LOAD (LOBBIES AND FIRST-FLOOR CORRIDORS) . . . . . 100 PSF
   FLOOR CONCENTRATED LOAD . . . . . 2000 LBS
   ROOF
   ROOF LIVE LOAD . . . . . 25 PSF
   MISCELLANEOUS LOADS
   STAIR AND CORRIDOR LIVE LOAD (UNLESS OTHERWISE INDICATED) . . . 100 PSF
   PARTITION LOADING . . . . . 15 PSF
   MECHANICAL UNITS . . . . . WEIGHTS FURNISHED BY MANUFACTURER
   DEFLECTION CRITERIA
   LIVE LOAD DEFLECTION L/360
   TOTAL LOAD DEFLECTION L/240
   ENVIRONMENTAL LOADS
   SNOW . . . . . Ce=1.0, Is=1.0, Ct=1.1, Pg=25 PSF, Pf=20 PSF
   WIND . . . . . GCpi=0.18, 110 MPH, RISK CATEGORY II, EXPOSURE "B"
   EARTHQUAKE . ANALYSIS PROCEDURE: EQUIVALENT LATERAL FORCE PROCEDURE
   LATERAL SYSTEM: SPECIAL REINFORCED CONCRETE SHEAR WALLS
   SITE CLASS=D, Ss=1.07, Sds=.76, S1=.42, SD1=.44,
   Cs=0.153 SDC D, Ie=1.0, R=5.0

   SPECIAL CONCENTRIC BRACED FRAMES ARE USE IN CONJUNCTION WITH REINFORCED CONCRETE SHEAR WALLS FOR GROUND MOTION IN THE EAST-WEST DIRECTION. SEISMIC LOADS CALCULATED USING THE DESIGN VALUES FOR REINFORCED CONCRETE SHEAR WALLS CONTROL AND ARE USED FOR THE DESIGN OF ALL SEISMIC-FORCE-RESISTING-ELEMENTS.





ZONE	COMPONENT AREA	DESIGN PRESSURE
①	10 SQ/FT (OR LESS)	-37PSF
	500 SQ/FT (OR MORE)	-25PSF
②	10 SQ/FT (OR LESS)	-58PSF
	500 SQ/FT (OR MORE)	-42PSF
③	10 SQ/FT (OR LESS)	-79PSF
	500 SQ/FT (OR MORE)	-58PSF
④	20 SQ/FT (OR LESS)	-25PSF/+25PSF
	500 SQ/FT (OR MORE)	-21PSF/+18PSF
⑤	20 SQ/FT (OR LESS)	-46PSF/+25PSF
	500 SQ/FT (OR MORE)	-28PSF/+18PSF

NOTES:
- PRESSURES MAY BE INTERPOLATED FOR COMPONENT AREAS BETWEEN AREA LIMITS LISTED ABOVE
- a=10% OF LEAST HORIZONTAL BUILDING DIMENSION (BUT NOT LESS THAN 3'-0")
- POSITIVE VALUES INDICATE PRESSURE TOWARDS SURFACE. NEGATIVE VALUES INDICATE PRESSURE AWAY FROM SURFACE (SUCTION)

Component and Cladding Wind Pressure Diagram – Ultimate Loads

SEE PLANS FOR ADDITIONAL LOADING CRITERIA

3. STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH ARCHITECTURAL DRAWINGS FOR BIDDING AND CONSTRUCTION. ARCHITECTURAL DRAWINGS ARE THE PRIME CONTRACT DRAWINGS. ANY DISCREPANCIES FOUND AMONG THE DRAWINGS, THE SPECIFICATION, THESE GENERAL NOTES AND THE SITE CONDITIONS SHALL BE REPORTED TO THE ARCHITECT, WHO SHALL CORRECT SUCH DISCREPANCY IN WRITING. ANY WORK DONE BY THE GENERAL CONTRACTOR AFTER DISCOVERY OF SUCH DISCREPANCY SHALL BE DONE AT THE GENERAL CONTRACTOR'S RISK.

4. PRIMARY STRUCTURAL ELEMENTS NOT DIMENSIONED ON THE STRUCTURAL PLANS AND DETAILS SHALL BE LOCATED BY THE ARCHITECTURAL PLANS AND DETAILS. VERTICAL DIMENSION CONTROL IS DEFINED BY THE ARCHITECTURAL WALL SECTIONS, BUILDING SECTION, AND PLANS. DETAILING AND SHOP DRAWING PRODUCTION FOR STRUCTURAL ELEMENTS WILL REQUIRE DIMENSIONAL INFORMATION CONTAINED IN BOTH ARCHITECTURAL AND STRUCTURAL DRAWINGS.

5. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SAFETY PRECAUTIONS AND THE METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES REQUIRED TO PERFORM THE CONTRACTORS WORK. THE STRUCTURAL ENGINEER HAS NO OVERALL SUPERVISORY AUTHORITY OR ACTUAL AND/OR DIRECT RESPONSIBILITY FOR THE SPECIFIC WORKING CONDITIONS AT THE SITE AND/OR FOR ANY HAZARDS RESULTING FROM THE ACTIONS OF ANY TRADE CONTRACTOR. THE STRUCTURAL ENGINEER HAS NO DUTY TO INSPECT, SUPERVISE, NOTE, CORRECT, OR REPORT ANY HEALTH OR SAFETY DEFICIENCIES TO THE OWNER, CONTRACTORS, OR OTHER ENTITIES OR PERSONS AT THE PROJECT SITE.

6. CONTRACTOR SHALL PROVIDE TEMPORARY BRACING FOR THE STRUCTURE AND STRUCTURAL COMPONENTS UNTIL ALL FINAL CONNECTIONS HAVE BEEN COMPLETED IN ACCORDANCE WITH THE PLANS. CONFORM TO ASCE 37-14 "DESIGN LOADS ON STRUCTURES DURING CONSTRUCTION".

7. CONTRACTOR-INITIATED CHANGES SHALL BE SUBMITTED IN WRITING TO THE ARCHITECT AND STRUCTURAL ENGINEER FOR APPROVAL PRIOR TO FABRICATION OR CONSTRUCTION. CHANGES SHOWN ON SHOP DRAWINGS ONLY WILL NOT SATISFY THIS REQUIREMENT.

8. DRAWINGS INDICATE GENERAL AND TYPICAL DETAILS OF CONSTRUCTION. WHERE CONDITIONS ARE NOT SPECIFICALLY INDICATED BUT ARE OF SIMILAR CHARACTER TO DETAILS SHOWN, SIMILAR DETAILS OF CONSTRUCTION SHALL BE USED, SUBJECT TO REVIEW AND APPROVAL BY THE ARCHITECT AND THE STRUCTURAL ENGINEER. ALL TYPICAL NOTES AND DETAILS SHOWN ON DRAWINGS SHALL APPLY, UNLESS NOTED OTHERWISE. TYPICAL DETAILS MAY NOT NECESSARILY BE INDICATED ON THE PLANS BUT SHALL STILL APPLY AS SHOWN OR DESCRIBED IN THE DETAILS. WHERE TYPICAL DETAILS ARE NOTED ON THE PLANS, THE SPECIFIED TYPICAL DETAIL SHALL BE USED. WHERE NO TYPICAL DETAIL IS NOTED, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CHOOSE THE APPROPRIATE TYPICAL DETAIL FROM THOSE PROVIDED OR REQUEST ADDITIONAL INFORMATION. THE CONTRACTOR SHALL SUBMIT ALL PROPOSED ALTERNATE TYPICAL DETAILS TO THOSE PROVIDED WITH RELATED CALCULATIONS TO THE ENGINEER FOR APPROVAL PRIOR TO SHOP DRAWING PRODUCTION AND FIELD USE.

9. ALL STRUCTURAL SYSTEMS, WHICH ARE TO BE COMPOSED OF COMPONENTS TO BE FIELD ERECTED, SHALL BE SUPERVISED BY THE SUPPLIER DURING MANUFACTURING, DELIVERY, HANDLING, STORAGE AND ERECTION IN ACCORDANCE WITH INSTRUCTIONS PREPARED BY THE SUPPLIER.

10. SHOP DRAWINGS FOR THE FOLLOWING ITEMS SHALL BE SUBMITTED TO THE ARCHITECT AND STRUCTURAL ENGINEER FOR REVIEW PRIOR TO FABRICATION OF THESE ITEMS.

    METAL DECKING
    LIGHT GAUGE STRUCTURAL FRAMING
    OPEN WEB STEEL JOISTS AND JOIST GIRDERS
    PRECAST CONCRETE MEMBERS
    REINFORCING STEEL (FOR BOTH CONCRETE AND MASONRY CONSTRUCTION)
    STRUCTURAL STEEL
    PRE-FABRICATED ASSEMBLIES (INCLUDING PANELIZED SYSTEMS)
    DESIGN BUILD ELEMENTS

    CONTRACTOR SHALL SUBMIT WALL ELEVATION DRAWINGS OF AT LEAST 1/8" = 1'-0" SCALE INDICATING LOCATIONS OF CONNECTION EMBEDMENT'S AND WALL OPENINGS FOR REVIEW PRIOR TO CONSTRUCTION. CONTRACTOR SHALL COORDINATE WALL ELEVATION DRAWINGS WITH REINFORCEMENT SHOP DRAWINGS.

    APPROVED SETS OF ALL SHOP DRAWINGS SHALL ALSO BE SUBMITTED TO THE BUILDING DEPARTMENT.

11. SHOP DRAWING REVIEW: DIMENSIONS AND QUANTITIES ARE NOT REVIEWED BY THE ENGINEER OF RECORD, THEREFORE MUST BE VERIFIED BY THE CONTRACTOR. CONTRACTOR SHALL REVIEW AND STAMP DRAWINGS PRIOR TO REVIEW BY ENGINEER OF RECORD. CONTRACTOR SHALL REVIEW DRAWINGS FOR CONFORMANCE WITH THE MEANS, METHODS, TECHNIQUES, SEQUENCES AND OPERATIONS OF CONSTRUCTION, AND ALL SAFETY PRECAUTIONS AND PROGRAMS INCIDENTAL THERETO. SUBMITTALS SHALL INCLUDE A REPRODUCIBLE AND ONE COPY; REPRODUCIBLE WILL BE MARKED AND RETURNED WITHIN TWO WEEKS OF RECEIPT WITH A NOTATION INDICATING THAT THE SUBMITTAL HAS BEEN FOUND TO BE IN GENERAL CONFORMANCE WITH THE DESIGN OF THE BUILDING. THE SUBMITTED ITEMS SHALL NOT BE INSTALLED UNTIL THEY HAVE BEEN APPROVED BY THE BUILDING OFFICIAL.

    SHOP DRAWING SUBMITTALS PROCESSED BY THE ENGINEER ARE NOT CHANGE ORDERS. THE PURPOSE OF SHOP DRAWING SUBMITTALS BY THE CONTRACTOR IS TO DEMONSTRATE TO THE ENGINEER THAT THE CONTRACTOR UNDERSTANDS THE DESIGN CONCEPT, BY INDICATING WHICH MATERIAL IS INTENDED TO BE FURNISHED AND INSTALLED AND BY DETAILING THE INTENDED FABRICATION AND INSTALLATION METHODS. IF DEVIATIONS, DISCREPANCIES, OR CONFLICTS BETWEEN SHOP DRAWING SUBMITTALS AND THE CONTRACT DOCUMENTS ARE DISCOVERED EITHER PRIOR TO OR AFTER SHOP DRAWING SUBMITTALS ARE PROCESSED BY THE ENGINEER, THE DESIGN DRAWINGS AND SPECIFICATIONS SHALL CONTROL AND SHALL BE FOLLOWED.

12. SHOP DRAWINGS OF DESIGN BUILD COMPONENTS INCLUDING CANOPIES, BALCONIES, COLD FORM STEEL FRAMING, TEMPORARY SHORING, CURTAIN WALL SYSTEMS, SKYLIGHT FRAMES, PREFABRICATED STAIR SYSTEMS, EXTERIOR CLADDING, AND PRE-ENGINEERED SYSTEM SHALL BE Stamped AND Signed BY A structural ENGINEER LICENSED IN THE STATE OF WASHINGTON. SHOP DRAWINGS SHALL BE APPROVED BY THE COMPONENT DESIGNER PRIOR TO REVIEW OF THE ARCHITECT OR ENGINEER OF RECORD FOR GENERAL CONFORMANCE WITH THE DESIGN OF THE BUILDING. THE COMPONENT DESIGNER IS RESPONSIBLE FOR CODE CONFORMANCE AND ALL NECESSARY CONNECTIONS NOT SPECIFICALLY CALLED OUT ON ARCHITECTURAL OR STRUCTURAL DRAWINGS. SHOP DRAWINGS SHALL INDICATE MAGNITUDE AND DIRECTION OF ALL LOADS IMPOSED ON BASIC STRUCTURE. DESIGN CALCULATIONS SHALL BE SUBMITTED WITH THE SHOP DRAWINGS.

13. EXTERIOR CLADDING PANELS AND CONNECTIONS SHALL BE DESIGNED BY THE MANUFACTURER FOR LOADING PRESCRIBED BY THE APPLICABLE BUILDING CODE IN ADDITION TO THE LOADS CONDITIONS SHOWN ON THE PLANS. MANUFACTURER SHALL SUBMIT DETAIL DRAWINGS AND CALCULATIONS Stamped AND Signed BY A structural ENGINEER LICENSED IN THE STATE OF WASHINGTON. THE MANUFACTURER'S ENGINEER SHALL BE RESPONSIBLE FOR DESIGN, CODE CONFORMANCE, AND CONNECTION OF EXTERIOR CLADDING PANELS TO BASIC STRUCTURE. ENGINEER OF RECORD TAKES NO RESPONSIBILITY FOR PRODUCT DESIGN, MANUFACTURE, DELIVERY AND HANDLING, OR CONNECTION TO BASIC STRUCTURE. SHOP DRAWINGS SHALL BEAR THE REVIEW STAMP OF THE DESIGNING ENGINEER'S FIRM PRIOR TO REVIEW BY THE ENGINEER OF RECORD. SHOP DRAWINGS SHALL INDICATE MAGNITUDE AND DIRECTION OF ALL LOADS IMPOSED ON BASIC STRUCTURE. ALL NECESSARY BRACING, TIES, ANCHORAGE, DISTRIBUTION MEMBERS, AND SIMILAR ELEMENTS SHALL BE FURNISHED AND INSTALLED IN CONFORMANCE WITH SUBMITTED DRAWINGS AND CALCULATIONS.

14. DEFERRED SUBMITTALS: SHOP DRAWINGS AND CALCULATIONS OF DEFERRED SUBMITTAL COMPONENTS SHALL BE STAMPED AND SIGNED BY A STRUCTURAL ENGINEER LICENSED IN THE STATE OF WASHINGTON AND SHALL BE APPROVED BY THE COMPONENT DESIGNER PRIOR TO REVIEW BY THE ARCHITECT OR ENGINEER OF RECORD FOR GENERAL CONFORMANCE. ALL NECESSARY CONNECTIONS NOT SPECIFICALLY CALLED OUT ON THE ARCHITECTURAL OR STRUCTURAL DRAWINGS SHALL BE INCLUDED. SHOP DRAWINGS SHALL INCLUDE the MAGNITUDE AND DIRECTION OF ALL LOADS IMPOSED ON THE BASIC STRUCTURE. DESIGN CALCULATIONS SHALL ACCOMPANY ALL DEFERRED SUBMITTALS. THE ARCHITECT OR CONTRACTOR SHALL FORWARD DEFERRED SUBMITTALS TO THE BUILDING OFFICIAL WHERE REQUIRED.

    DEFERRED SUBMITTAL BUILDING COMPONENTS FOR THIS PROJECT SHALL INCLUDE:

    DESIGN-BUILD ELEMENTS
    STEEL STAIRS
    HANDRAIL AND GUARDRAIL SYSTEMS
    CLADDING PANELS
    OPEN WEB STEEL JOISTS

QUALITY ASSURANCE

15. SPECIAL INSPECTION SHALL BE PROVIDED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS AND SECTIONS 110 AND 1705 OF THE INTERNATIONAL BUILDING CODE BY A QUALIFIED TESTING AGENCY DESIGNATED BY THE ARCHITECT, AND RETAINED BY THE BUILDING OWNER. THE ARCHITECT, STRUCTURAL ENGINEER, AND BUILDING DEPARTMENT SHALL BE FURNISHED WITH COPIES OF ALL INSPECTION AND TEST RESULTS. SPECIAL INSPECTION OF THE FOLLOWING TYPES OF CONSTRUCTION IS REQUIRED UNLESS NOTED OTHERWISE.

STRUCTURAL STEEL FABRICATION AND ERECTION	PER AISC 360
OPEN-WEB STEEL JOISTS AND JOIST GIRDERS	PER TABLE 1705.2.3
COLD FORMED STEEL DECK CONSTRUCTION	PER ANSI/SDI QA/QC-2011
CONCRETE CONSTRUCTION	PER TABLE 1705.3
PRECAST CONCRETE ERECTION	PER TABLE 1705.3
SOIL CONDITIONS, FILL PLACEMENT, AND DENSITY	PER TABLE 1705.6
EXPANSION BOLTS AND THREADED EXPANSION INSERTS	PER MANUFACTURER
EPOXY GROUTED INSTALLATIONS	PER MANUFACTURER

    PERIODIC INSPECTION: INSPECTION SHALL BE PERFORMED AT INTERVALS NECESSARY TO CONFIRM THAT WORK REQUIRING SPECIAL INSPECTION IS IN COMPLIANCE WITH REQUIREMENTS.
    CONTINUOUS INSPECTION: INSPECTOR SHALL BE ONSITE AND OBSERVE THE WORK REQUIRING INSPECTION AT ALL TIMES THAT WORK IS PERFORMED.

16. UNLESS OTHERWISE NOTED, THE FOLLOWING ELEMENTS COMPRISE THE SEISMIC-FORCE-RESISTING SYSTEM AND ARE SUBJECT TO SPECIAL INSPECTION FOR SEISMIC RESISTANCE IN ACCORDANCE WITH SECTION 1705.12 OF THE INTERNATIONAL BUILDING CODE.

    A. STRUCTURAL STEEL MOMENT FRAMES AND BRACED FRAMES REQUIRE CONTINUOUS INSPECTION FOR WELDING PER AISC 341 EXCEPT SINGLE PASS FILLET WELDS NOT EXCEEDING 5/16-INCH.

    B. COLD FORMED STEEL FRAMING REQUIRES PERIODIC INSPECTION OF WELDING, SCREW ATTACHMENT, BOLTING, ANCHORING AND OTHER FASTENING OF COMPONENTS WITHIN THE SEISMIC FORCE RESISTING SYSTEM INCLUDING SHEAR WALLS, DIAPHRAGMS, BRACES AND HOLDOWNS.

17. UNLESS OTHERWISE NOTED, THE FOLLOWING ELEMENTS COMPRISE THE SEISMIC-FORCE-RESISTING SYSTEM AND ARE SUBJECT TO SPECIAL TESTING FOR SEISMIC RESISTANCE PER SECTION 1705.13 OF THE INTERNATIONAL BUILDING CODE.

    A. ASTM A615 REINFORCEMENT USED IN SPECIAL CONCRETE MOMENT FRAMES, AND SPECIAL CONCRETE SHEAR WALLS, COUPLING BEAMS SHALL COMPLY WITH ACI 318, SECTION 21.1.5.2, AND REQUIRE TESTING PER 1705.12.1 OF THE INTERNATIONAL BUILDING CODE.

    B. STRUCTURAL STEEL USED IN MOMENT FRAMES AND BRACED FRAMES SHALL BE IN ACCORDANCE WITH THE QUALITY ASSURANCE REQUIREMENTS OF AISC 341.

18. STRUCTURAL OBSERVATION SHALL BE PERFORMED IN ACCORDANCE WITH SECTIONS 1704.6 OF THE INTERNATIONAL BUILDING CODE FOR THE FOLLOWING BUILDING ELEMENTS:

    LIGHT FRAMED SHEAR WALLS
    CONCRETE CONSTRUCTION
    STRUCTURAL STEEL CONSTRUCTION

    THE CONTRACTOR SHALL PROVIDE THE ENGINEER OF RECORD ADEQUATE NOTICE TO SCHEDULE APPROPRIATE SITE VISITS FOR STRUCTURAL OBSERVATION.

    STRUCTURAL OBSERVATION MEANS THE VISUAL OBSERVATION OF THE STRUCTURAL SYSTEM, FOR GENERAL CONFORMANCE TO THE APPROVED PLANS AND SPECIFICATIONS, AT SIGNIFICANT CONSTRUCTION STAGES AND AT COMPLETION OF THE STRUCTURAL SYSTEM. STRUCTURAL OBSERVATION DOES NOT INCLUDE OR WAIVE THE RESPONSIBILITY FOR THE INSPECTIONS REQUIRED BY SECTION 110, 1705, OR OTHER SECTIONS OF THE INTERNATIONAL BUILDING CODE.

    THE OWNER SHALL EMPLOY THE ENGINEER OR ARCHITECT RESPONSIBLE FOR THE STRUCTURAL DESIGN, TO PERFORM STRUCTURAL OBSERVATION. OBSERVED DEFICIENCIES SHALL BE REPORTED IN WRITING TO THE OWNER'S REPRESENTATIVE, SPECIAL INSPECTOR, CONTRACTOR, AND THE BUILDING OFFICIAL. THE STRUCTURAL OBSERVER SHALL SUBMIT TO THE BUILDING OFFICIAL A WRITTEN STATEMENT THAT THE SITE VISITS HAVE BEEN MADE AND IDENTIFYING ANY REPORTED DEFICIENCIES WHICH, TO THE BEST OF THE STRUCTURAL OBSERVER'S KNOWLEDGE, HAVE NOT BEEN RESOLVED.

GEOTECHNICAL

19. FOUNDATION NOTES: SUBGRADE PREPARATION INCLUDING DRAINAGE, EXCAVATION, COMPACTION, AND FILLING REQUIREMENTS, SHALL CONFORM STRICTLY WITH RECOMMENDATIONS GIVEN IN THE SOILS REPORT OR AS DIRECTED BY THE SOILS ENGINEER. FOOTINGS SHALL BEAR ON SOLID UNDISTURBED EARTH OR COMPACTED STRUCTURAL FILL AT LEAST 18" BELOW LOWEST ADJACENT FINISHED GRADE. FOOTING DEPTHS/ELEVATIONS SHOWN ON PLANS (OR IN DETAILS) ARE MINIMUM AND FOR GUIDANCE ONLY; THE ACTUAL ELEVATIONS OF FOOTINGS MUST BE ESTABLISHED BY THE CONTRACTOR IN THE FIELD WORKING WITH THE TESTING LAB AND SOILS ENGINEER. BACKFILL BEHIND ALL RETAINING WALLS WITH FREE DRAINING GRANULAR FILL AND PROVIDE FOR SUBSURFACE DRAINAGE AS NOTED IN THE SOILS REPORT.

    ALLOWABLE SOIL PRESSURE (NATIVE SOILS / STRUCTURAL FILL). . . 2500/2000 PSF
    LATERAL EARTH PRESSURE (RESTRAINED/UNRESTRAINED). . . . . 55 PCF/35 PCF
    ALLOWABLE PASSIVE EARTH PRESSURE (FS OF 1.5 INCLUDED). . . . . 300 PCF
    COEFFICIENT OF FRICTION (FS OF 1.5 INCLUDED). 0.3
    TRAFFIC SURCHARGE PRESSURE (UNIFORM LOAD) . . . . . 75 PSF
    SEISMIC SURCHARGE PRESSURE (UNIFORM LOAD) . . . . . 7H PSF

    SOILS REPORT REFERENCE:

CONCRETE

20. CONCRETE SHALL BE MIXED, PROPORTIONED, CONVEYED AND PLACED IN ACCORDANCE WITH ACI 301. STRENGTHS AT 28 DAYS AND MIX CRITERIA SHALL BE PER TABLE 1:

    MIX DESIGN NOTES:

    A. MAXIMUM SHRINKAGE IN ALL 5000 PSI MIXES SHALL BE LIMITED TO .04 PERCENT IN 28 DAYS AS TESTED IN ACCORDANCE WITH ASTM C157 MODIFIED STANDARD TEST METHOD FOR LENGTH CHANGE OF CEMENT MORTAR AND CONCRETE.
    B. W/C RATIO: WATER-CEMENTITIOUS MATERIAL RATIOS SHALL BE BASED ON THE TOTAL WEIGHT OF CEMENTITIOUS MATERIALS. RATIOS NOT NOTED IN TABLE ABOVE ARE CONTROLLED BY STRENGTH REQUIREMENTS.
    C. CEMENTITIOUS CONTENT: THE USE OF FLY ASH, OTHER POZZOLANS, SILICA FUME, OR SLAG SHALL CONFORM TO ACI 301 SEC 4.2.2.8.B. FOR CONCRETE USED IN ELEVATED FLOORS, PORTLAND CEMENT CONTENT SHALL CONFORM TO ACI 301 SEC 4.2.2.1. ACCEPTANCE OF LOWER CEMENT CONTENT IS CONTINGENT ON PROVIDING SUPPORTING DATA TO THE ENGINEER FOR REVIEW AND ACCEPTANCE.
    D. AIR CONTENT SHALL CONFORM TO ACI 301 SEC 4.2.2.4. HORIZONTAL EXTERIOR SURFACES IN CONTACT WITH THE SOIL REQUIRE ENTRAINED AIR. USE "MODERATE EXPOSURE". VERTICAL EXTERIOR SURFACES REQUIRE "MODERATE EXPOSURE". TOLERANCE IS +/- 1.5 PERCENT. AIR CONTENT SHALL BE MEASURED AT POINT OF PLACEMENT.
    E. SLUMP SHALL CONFORM TO ACI 301 SEC 4.2.2.2. SLUMP SHALL BE DETERMINED AT THE POINT OF PLACEMENT.
    F. CHLORIDE CONTENT SHALL CONFORM TO ACI 301 SEC 4.2.2.6 AND TABLE 4.2.2.6 FOR "OTHER REINFORCED CONCRETE CONSTRUCTION".

General Structural Notes cont. on S1.2

TABLE 1 - CONCRETE MIX STRENGTHS AND EXPOSURE REQUIREMENTS

TYPE OF CONSTRUCTION						EXPOSURE AND CATEGORY CLASSES			
	f'c (PSI)	TEST AGE (DAYS)	MAX AGG (INCH)	MAX W/C (RATIO)	AIR CONT. (%)	FREEZING & THAWING (F)	SULFATE (S)	PERMEABILITY (P)	CORROSION PROTECTION OF REINFORCEMENT (C)
SLABS ON GRADE	3000	28	1	0.45	5	F0	S0	P0	C0
TOPPING SLABS	3000	28	1	0.50	-	F0	S0	P0	C0
FOOTINGS/GR. BEAMS/PILE CAPS	4000	28	1	0.50	-	F0	S0	P0	C1
BASEMENT WALLS	4000	28	1	0.45	-	F0	S0	P0	C0
COLUMNS AND SHEAR WALLS	5000	28	3/4	0.50	-	F0	S0	P0	C0
SLABS ON METAL DECK	3000	28	1	0.50	-	F0	S0	P0	C0
STAIR LANDINGS AND TREADS	3000	28	1	0.50	-	F0	S0	P0	C0
PRECAST, NON-PRESTRESSED	5000	28	1	0.42	-	F0	S0	P0	C0
ALL STRUCTURAL CONCRETE, UNO	3000	28	1	0.50	-	F0	S0	P0	C0
EXTERIOR BEAMS, WALLS AND COLUMNS	5000	28	3/4	0.42	5	F1	S1	P1	C1
EXTERIOR STRUCTURAL CONCRETE, UNO	4500	28	1	0.5	5	F1	S1	P1	C1

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SCALE:

DATE: Sept. 2016

PROJECT NO: 10902-2016-03

SHEET NO: S1.1

NO: OF SHEETS:

General Structural Notes Continued

THE FOLLOWING APPLY UNLESS SHOWN OTHERWISE ON THE DRAWINGS

21. A CONCRETE PERFORMANCE MIX SHALL BE SUBMITTED TO THE STRUCTURAL ENGINEER AND THE BUILDING DEPARTMENT FOR APPROVAL TWO WEEKS PRIOR TO PLACING ANY CONCRETE. THE PERFORMANCE MIX SHALL INCLUDE THE AMOUNTS OF CEMENT, FINE AND COARSE AGGREGATE, WATER AND ADMIXTURES AS WELL AS THE WATER CEMENT RATIO, SLUMP, CONCRETE YIELD AND SUBSTANTIATING STRENGTH DATA IN ACCORDANCE WITH ACI 318, SECTION 5.3. THE USE OF A PERFORMANCE MIX REQUIRES BATCH PLANT INSPECTION, THE COST OF WHICH SHALL BE PAID BY THE GENERAL CONTRACTOR. REVIEW OF MIX SUBMITTALS BY THE ENGINEER OF RECORD INDICATES ONLY THAT INFORMATION PRESENTED CONFORMS GENERALLY WITH CONTRACT DOCUMENTS. CONTRACTOR OR SUPPLIER MAINTAINS FULL RESPONSIBILITY FOR SPECIFIED PERFORMANCE.

22. ALL CONCRETE WITH SURFACES EXPOSED TO WEATHER OR STANDING WATER SHALL BE AIR-ENTRAINED WITH AN AIR-ENTRAINING AGENT CONFORMING TO ASTM C260, C494, AND C618. TOTAL AIR CONTENT FOR FROST-RESISTANT CONCRETE SHALL BE IN ACCORDANCE WITH ACI 318, TABLE 19.3.2.1 MODERATE EXPOSURE, F1.

23. REINFORCING STEEL SHALL CONFORM TO ASTM A615 (INCLUDING SUPPLEMENT S1), GRADE 60, FY = 60,000 PSI. EXCEPTIONS: ANY BARS SPECIFICALLY SO NOTED ON THE DRAWINGS SHALL BE GRADE 40, FY = 40,000 PSI. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A-185. SPIRAL REINFORCEMENT SHALL BE DEFORMED WIRE CONFORMING TO ASTM A615, GRADE 60, FY = 60,000 PSI.

24. LONGITUDINAL REINFORCEMENT IN DUCTILE FRAME MEMBERS AND IN WALL BOUNDARY MEMBERS SHALL COMPLY WITH ASTM A706. ASTM A615 GRADES 40 AND 60 REINFORCEMENT ARE ALLOWED IN THESE MEMBERS IF (A) THE ACTUAL YIELD STRENGTH BASED ON MILL TESTS DOES NOT EXCEED THE SPECIFIED YIELD STRENGTH BY MORE THAN 18,000 PSI AND (B) THE RATIO OF THE ACTUAL ULTIMATE TENSILE STRESS TO THE ACTUAL TENSILE YIELD STRENGTH IS NOT LESS THAN 1.25.

25. WELDING OF GRADE 60 REINFORCING BARS INDICATED ON DRAWINGS SHALL CONFORM TO ASTM A706. REINFORCING COMPLYING WITH ASTM A615 (S1) MAY BE WELDED ONLY IF MATERIAL PROPERTY REPORTS INDICATING CONFORMANCE WITH WELDING PROCEDURES SPECIFIED IN AWS D1.4 ARE SUBMITTED. WELDING OF GRADE 60 REINFORCING BARS SHALL BE PERFORMED USING LOW HYDROGEN ELECTRODES. WELDING OF GRADE 40 REINFORCING BARS SHALL BE PERFORMED USING E70XX ELECTRODES. WELDING WITHIN 4" OF COLD BENDS IN REINFORCING STEEL IS NOT PERMITTED.

26. DETAILING OF REINFORCING STEEL (INCLUDING HOOKS AND BENDS) SHALL BE IN ACCORDANCE WITH ACI 315-99 AND 318-14. LAP ALL CONTINUOUS REINFORCEMENT #5 AND SMALLER 40 BAR DIAMETERS OR 2'-0" MINIMUM. PROVIDE CORNER BARS AT ALL WALL AND FOOTING INTERSECTIONS. LAP CORNER BARS #5 AND SMALLER 40 BAR DIAMETERS OR 2'-0" MINIMUM. LAPS OF LARGER BARS SHALL BE MADE IN ACCORDANCE WITH ACI 318-14, CLASS B. LAP ADJACENT MATS OF WELDED WIRE FABRIC A MINIMUM OF 8" AT SIDES AND ENDS.

    NO BARS PARTIALLY EMBEDDED IN HARDENED CONCRETE SHALL BE FIELD BENT UNLESS SPECIFICALLY SO DETAILED OR APPROVED BY THE STRUCTURAL ENGINEER.

27. DETAILING OF REINFORCING STEEL (INCLUDING HOOKS AND BENDS) SHALL BE IN ACCORDANCE WITH ACI 315-99 AND 318-14. LAP ALL REINFORCEMENTS IN ACCORDANCE WITH "THE REINFORCING SPLICE AND DEVELOPMENT LENGTH SCHEDULE." PROVIDE CORNER BARS AT ALL WALL AND FOOTING INTERSECTIONS. LAP ADJACENT MATS OF WELDED WIRE FABRIC A MINIMUM OF 8" AT SIDES AND ENDS.

    NO BARS PARTIALLY EMBEDDED IN HARDENED CONCRETE SHALL BE FIELD BENT UNLESS SPECIFICALLY SO DETAILED OR APPROVED BY THE STRUCTURAL ENGINEER.

28. CONCRETE PROTECTION (COVER) FOR REINFORCING STEEL SHALL BE AS FOLLOWS:

    FOOTINGS AND OTHER UNFORMED SURFACES CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH . . . . . 3"
    FORMED SURFACES EXPOSED TO EARTH OR WEATHER (#6 BARS OR LARGER) . . . . 2"
    FORMED SURFACES EXPOSED TO EARTH OR WEATHER (#5 BARS OR SMALLER). . 1-1/2"
    COLUMN TIES OR SPIRALS AND BEAM STIRRUPS . . . . . 1-1/2"
    SLABS AND WALLS (INT. FACE). . . .GREATER OF BAR DIAMETER PLUS 1/8" OR 3/4"

29. CONCRETE WALL REINFORCING--PROVIDE THE FOLLOWING UNLESS DETAILED OTHERWISE:

6" WALLS	#4 @ 16 HORIZ.	#4 @ 18 VERTICAL	1 CURTAIN
8" WALLS	#4 @ 12 HORIZ.	#4 @ 18 VERTICAL	1 CURTAIN
10" WALLS	#4 @ 18 HORIZ.	#4 @ 18 VERTICAL	2 CURTAINS
12" WALLS	#4 @ 16 HORIZ.	#4 @ 18 VERTICAL	2 CURTAINS

30. CAST-IN-PLACE AND TILT-UP CONCRETE: SEE ARCHITECTURAL DRAWINGS FOR EXACT LOCATIONS AND DIMENSIONS OF DOOR AND WINDOW OPENINGS IN ALL CONCRETE WALLS. SEE MECHANICAL DRAWINGS FOR SIZE AND LOCATION OF MISCELLANEOUS MECHANICAL OPENINGS THROUGH CONCRETE WALLS. SEE ARCHITECTURAL DRAWINGS FOR ALL GROOVES, NOTCHES, CHAMFERS, FEATURE STRIPS, COLOR, TEXTURE, AND OTHER FINISH DETAILS AT ALL EXPOSED CONCRETE SURFACES, BOTH CAST-IN-PLACE AND PRECAST.

31. NON-SHRINK GROUT SHALL BE FURNISHED BY AN APPROVED MANUFACTURER AND SHALL BE MIXED AND PLACED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S PUBLISHED RECOMMENDATIONS. GROUT STRENGTH SHALL BE AT LEAST EQUAL TO THE MATERIAL ON WHICH IT IS PLACED (3000 PSI MINIMUM).

32. MECHANICAL SPLICING OF REINFORCING BARS, WHERE INDICATED ON THE DRAWINGS, SHALL BE BY AN ICC-ES APPROVED SYSTEM (SUCH AS LENTON, FOX-HOWLETT, ETC.) AND SHALL DEVELOP 125% OF THE SPECIFIED YIELD STRENGTH OF THE BARS. SPLICE LOCATIONS OF ALTERNATE BARS SHALL BE OFFSET BY A DISTANCE WHICH CONFORMS TO THE ICC-ES REPORT OF THE SPLICE USED. REFER TO THE STRUCTURAL PLANS FOR LIMITATIONS ON PLACEMENT OF MECHANICAL SPLICES.

ANCHORAGE

33. EXPANSION BOLTS INTO CONCRETE AND CONCRETE MASONRY UNITS SHALL BE "KWIK BOLT TZ" AS MANUFACTURED BY THE HILTI CORP., INSTALLED IN STRICT ACCORDANCE WITH ICC-ES REPORT NO. ESR-1917, INCLUDING MINIMUM EMBEDMENT REQUIREMENTS. BOLTS INTO CONCRETE MASONRY OR BRICK MASONRY UNITS SHALL BE INTO FULLY GROUTED CELLS. SUBSTITUTES PROPOSED BY CONTRACTOR SHALL BE SUBMITTED FOR REVIEW WITH ICC REPORTS INDICATING EQUIVALENT OR GREATER LOAD CAPACITIES. PERIODIC SPECIAL INSPECTION IS REQUIRED TO VERIFY ANCHOR TYPE, ANCHOR DIMENSIONS, ANCHOR LOCATION, TIGHTENING TORQUE, HOLE DIMENSIONS, ANCHOR EMBEDMENT, AND ADHERENCE TO THE INSTALLATION INSTRUCTIONS.

34. EPOXY-GROUTED ITEMS (THREADED RODS OR REINFORCING BAR) SPECIFIED ON THE DRAWINGS SHALL BE INSTALLED USING "HIT RE 500-SD V3" AS MANUFACTURED BY HILTI CORP. INSTALL IN STRICT ACCORDANCE WITH ICC-ES REPORT NO. ESR-3814. MINIMUM BASE MATERIAL TEMPERATURE IS 41 DEGREES, F. RODS SHALL BE ASTM A-36 UNLESS OTHERWISE NOTED. PERIODIC SPECIAL INSPECTION OF INSTALLATION IS REQUIRED TO VERIFY ANCHOR OR EMBEDDED BAR TYPE AND DIMENSIONS, LOCATION, ADHESIVE IDENTIFICATION AND EXPIRATION, HOLE DIMENSIONS, HOLE CLEANING PROCEDURE, ANCHOR EMBEDMENT, AND ADHERENCE TO THE INSTALLATION INSTRUCTIONS. CONTINUOUS SPECIAL INSPECTION IS REQUIRED FOR HORIZONTAL AND OVERHEAD INSTALLATIONS.

35. CONCRETE SCREW ANCHORS INTO CONCRETE AND CONCRETE MASONRY UNITS SHALL BE "TITEN HD" HEAVY DUTY SCREW ANCHOR AS MANUFACTURED BY THE SIMPSON STRONG-TIE COMPANY, INSTALLED IN STRICT ACCORDANCE WITH ICC-ES REPORT NO. ESR-2713 (CONCRETE), NO. ESR-1056 (CMU), INCLUDING MINIMUM EMBEDMENT REQUIREMENTS. SCREW ANCHORS INTO CONCRETE MASONRY UNITS SHALL BE INTO FULLY GROUTED CELLS. SPECIAL INSPECTION IS REQUIRED.

36. DRIVE PINS AND OTHER POWDER-ACTUATED FASTENERS SHALL BE LOW VELOCITY TYPE (SERIES X-U, 0.157" DIAMETER (STEEL), UNLESS OTHERWISE NOTED) AS MANUFACTURED BY THE HILTI CORP. OR AN APPROVED EQUIVALENT IN STRENGTH AND EMBEDMENT. INSTALL IN STRICT ACCORDANCE WITH ICC-ES REPORT NO. ESR-1663. MINIMUM EMBEDMENT IN CONCRETE SHALL BE 1" UNLESS OTHERWISE NOTED. MAINTAIN AT LEAST 3" TO NEAREST CONCRETE EDGE.

STEEL

37. STRUCTURAL STEEL DESIGN, FABRICATION, AND ERECTION SHALL BE BASED ON:

    A. AISC 360 AND SECTION 2205.2 OF THE INTERNATIONAL BUILDING CODE.
    B. APRIL 14, 2010 AISC CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES AMENDED AS FOLLOWS: AS NOTED IN THE CONTRACT DOCUMENTS, BY THE DELETION OF PARAGRAPH 4.4.1, AND REVISE REFERENCE FROM "STRUCTURAL DESIGN DRAWINGS" TO "CONTRACT DOCUMENTS" IN PARAGRAPH 3.1.
    C. SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS.

38. STRUCTURAL STEEL SHALL CONFORM TO THE FOLLOWING REQUIREMENTS:

TYPE OF MEMBER	ASTM SPECIFICATION	FY
A. WIDE FLANGE SHAPES	A992	50 KSI
B. OTHER SHAPES, PLATES, AND RODS	A36	36 KSI
C. OTHER SHAPES AND PLATES (NOTED GRADE 50 ON PLANS)	A572 (GRADE 50)	50 KSI
D. PIPE COLUMNS	A53 (E OR S, GR.B)	35 KSI
E. STRUCTURAL TUBING -SQUARE OR RECTANGULAR	A500 (GR.B) OR ASTM A1085	46 KSI
-ROUND		42 KSI
F. CONNECTION BOLTS (3/4" ROUND, UNLESS SHOWN OTHERWISE)	A325-N	

39. ARCHITECTURALLY EXPOSED STRUCTURAL STEEL SHALL CONFORM TO SECTION 10 OF THE AISC CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES.

40. ALL STEEL EXPOSED TO THE WEATHER OR IN CONTACT WITH GROUND SHALL BE CORROSION PROTECTED BY GALVANIZATION OR PROVIDED WITH EXTERIOR PAINT SYSTEM, UNLESS OTHERWISE NOTED.

41. SHOP PRIME ALL STEEL EXCEPT:

    A. STEEL ENCASED IN CONCRETE.
    B. SURFACES TO BE WELDED.
    C. CONTACT SURFACES AT HIGH-STRENGTH BOLTS.
    D. MEMBERS TO BE GALVANIZED.
    E. MEMBERS WHICH WILL BE CONCEALED BY INTERIOR FINISHES.
    F. SURFACES TO RECEIVE SPRAYED FIREPROOFING.
    G. SURFACES TO RECEIVE OTHER SPECIAL SHOP PRIMERS.

42. ALL A-325N CONNECTION BOLTS NEED ONLY BE TIGHTENED TO A SNUG TIGHT CONDITION, DEFINED AS THE TIGHTNESS THAT EXISTS WHEN ALL PLIES IN A JOINT ARE IN FIRM CONTACT. THIS MAY BE ATTAINED BY A FEW IMPACTS OF AN IMPACT WRENCH OR THE FULL EFFORT OF AN IRONWORKER USING AN ORDINARY SPUD WRENCH.

43. ALL ANCHORS EMBEDDED IN MASONRY OR CONCRETE SHALL BE A307 HEADED BOLTS OR A36 THREADED ROD WITH AN ASTM 563 HEAVY HEX NUT TACK WELDED ON THE EMBEDDED END.

44. OPEN WEB STEEL JOISTS (INCLUDING BRIDGING) SHALL CONFORM TO SECTION 2207 OF THE INTERNATIONAL BUILDING CODE AND THE SPECIFICATIONS OF THE STEEL JOIST INSTITUTE, LATEST EDITION, FOR THE JOIST SERIES DESIGNATED ON THE PLANS. ENDS OF BRIDGING ROWS SHALL BE FIELD WELDED TO STRUCTURAL STEEL MEMBERS OR TO PLATES EMBEDDED IN CONCRETE OR MASONRY UNLESS DETAILED OTHERWISE. JOIST MANUFACTURER SHALL CHECK ROOF JOIST AND PROVIDE UPLIFT BRIDGING AS REQUIRED TO ADEQUATELY BRACE THE BOTTOM CHORD AGAINST LATERAL MOVEMENT UNDER WIND UPLIFT PRESSURES (SEE DESIGN CRITERIA NOTE FOR WIND CRITERIA). AT COMPLETION OF MANUFACTURE OF JOISTS, THE MANUFACTURER SHALL SUBMIT A CERTIFICATE OF COMPLIANCE IN ACCORDANCE WITH IBC SECTION 2207.5.

45. ALL WELDING SHALL BE IN CONFORMANCE WITH AISC AND AWS STANDARDS AND SHALL BE PERFORMED BY WABO CERTIFIED WELDERS USING E70XX ELECTRODES. ONLY PREQUALIFIED WELDS (AS DEFINED BY AWS) SHALL BE USED. ALL COMPLETE JOINT PENETRATION GROOVE WELDS SHALL BE MADE WITH A FILLER MATERIAL THAT HAS A MINIMUM CVN TOUGHNESS OF 20 FT-LBS AT -20 DEGREES F AND 40 FT - LBS AT 70 DEGREES F, AS DETERMINED BY AWS CLASSIFICATION OR MANUFACTURER CERTIFICATION.

46. METAL FLOOR AND ROOF DECKING SHALL BE IN ACCORDANCE TO THE FOLLOWING: PROVIDE SIZE, TYPE, GAUGE, AND ATTACHMENT TO THE SUPPORTING STRUCTURE AS SHOWN ON THE PLANS. ARC SEAM AND SPOT (PUDDLE) WELDS FOR FIELD ASSEMBLY OF METAL DECK SHALL BE MADE WITH MINIMUM E60XX ELECTRODES. DECK ALTERNATES MUST BE CONNECTED ACCORDING TO PUBLISHED ICC-ES CRITERIA FOR DIAPHRAGM SHEARS SHOWN. PROVIDE TEMPORARY SHORING WHERE REQUIRED PER MANUFACTURER'S PUBLISHED CRITERIA.

    A. NONCOMPOSITE STEEL FLOOR DECKS SHALL BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH ANSI/SDI-NC1.0.
    B. STEEEL ROOF DECK SHALL BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH ANSI/SDI-RD1.0.
    C. COMPSITE SLABS ON STEEL DECKS SHALL BE DESIGNED AND CONSTRUCTED IN ACCORDANCE TWITH SDI-C.

47. COLD-FORMED STEEL FRAMING NOTES--THE FOLLOWING APPLY UNLESS OTHERWISE SHOWN ON THE PLANS:

    A. COLD FORMED STEEL DESIGN, FABRICATION, AND ERECTION SHALL BE BASED ON AISI S100-12, "NORTH AMERICAN SPECIFICATION FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS," AND ON THE 2012 NORTH AMERICAN STANDARDS FOR COLD FORMED STEEL FRAMING, INCLUSIVE.

    B. THE CONTRACTOR SHALL PROVIDE A QUALITY CONTROL PROGRAM OVER ALL FABRICATION AND ERECTION ACTIVITY THROUGH THE USE OF AN INDEPENDENT TESTING AGENCY AND/OR A QUALIFIED REPRESENTATIVE OF THE STEEL MANUFACTURER. THE CONTRACTOR SHALL OBTAIN MILL CERTIFICATION FROM THE GAUGE STEEL MANUFACTURER OR SHALL SUBMIT TENSILE TESTS AND GALVANIZATION TESTS TO THE ENGINEER OF RECORD TO VERIFY THE ADEQUACY OF THE GAUGE MATERIALS.

    C. COLD-FORMED STEEL FRAMING MEMBERS INDICATED ON PLAN SHALL BE IN ACCORDANCE WITH THE "2015 IBC-SSMA PRODUCT TECHNICAL GUIDE" PUBLISHED BY THE STEEL STUD MANUFACTURERS ASSOCIATION, AND SHALL COMPLY WITH ICC-ES REPORT ESR-3064P.

DESIGNATION:	600	S	200	-	54
	DEPTH	MEMBER STYLE	FLANGE WIDTH		MATERIAL THICKNESS(MILS)

    D. MATERIAL:

    METAL FRAMING SHALL BE GALVANIZED UNLESS OTHERWISE NOTED, CONFORMING AS FOLLOWS:

ASTM A653, GRADE 50	FY = 50 KSI	12, 14, AND 16 GAUGE
ASTM A653, GRADE 33	FY = 33 KSI	18 AND 20 GAUGE

    WHERE NOTED, PAINTED STUDS SHALL CONFORM TO: ASTM A570, GRADE E, FY=KSI. ALL 8 AND 10 GAGE MATERIAL SHALL CONFORM TO: ASTM A36, FY=36 KSI

    E. THE DESIGN OF INTERIOR COLD FORMED STEEL NON-BEARING WALLS, SOFFITS, CEILINGS AND OTHER MISCELLANEOUS FRAMING AND CONNECTIONS TO STRUCTURE SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL CONFORM TO THE REQUIREMENTS OF THE ARCHITECTURAL DRAWINGS. DESIGN AND DETAILING SHALL BE UNDER THE DIRECTION OF A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF WASHINGTON AND STAMPED DRAWINGS AND CALCULATIONS SHALL BE SUBMITTED TO THE ENGINEER OF RECORD PRIOR TO CONSTRUCTION.

    F. ACCESSORIES SHALL BE OF THE TYPE, SIZE, AND SPACING SHOWN ON THE DRAWINGS OF A MINIMUM 16 GAUGE MATERIAL UNLESS OTHERWISE SPECIFIED. FASTENING OF COMPONENTS SHALL BE BY WELDING OR SCREWING OR BY OTHER MEANS OF FASTENING AS INDICATED ON THE DRAWINGS. PROVIDE MISCELLANEOUS CLIP ANGLES, LEDGERS, AND ACCESSORIES OF A MINIMUM 16 GAUGE OR THE THICKNESS OF THE MATERIAL BEING FASTENED, WHICHEVER IS GREATER, FOR CONNECTIONS AND BEARING CONDITIONS NOT OTHERWISE NOTED IN THE DRAWINGS. WELDS SHALL BE OF SUFFICIENT SIZE TO INSURE THE STRENGTH OF THE CONNECTION: WIRE TYING OF COMPONENTS SHALL NOT BE PERMITTED. ALL WELDS SHALL BE TOUCHED UP WITH A ZINC-RICH PAINT.

    G. SCREWS: ALL SCREWS (REFERRED TO AS TEK) SHALL BE SELF-TAPPING SELF-DRILLING FASTENERS THAT ARE ZINC COATED AS MANUFACTURED BY HILTI KWIK-FLEX (ICC-ES ESR-2196), OR APPROVED EQUAL. THE MINIMUM SCREW SIZE/TYPE/POINT SHALL BE #8-18 (#2 POINT) OR #10-16 (#2 POINT) FOR USE IN 20 GAUGE THROUGH 16 GAUGE, AND #10-16 (#3 POINT) OR #12-14 (#2 OR #3 POINT) FOR HEAVIER THAN 16 GAUGE UNLESS NOTED OTHERWISE. SCREWS FOR SHEATHING CONNECTIONS SHALL BE OF THE PROPER SIZE AND TYPE FOR A POSITIVE SHEATHING-TO-METAL CONNECTION. ALL SCREW CONNECTIONS SHALL BE MADE FROM THE LIGHTER MATERIAL INTO THE HEAVIER MATERIAL UNLESS NOTED OTHERWISE. SCREWS SHALL HAVE A MINIMUM PROJECTION OF 3 THREADS THROUGH THE LAST MATERIAL JOINED AND SHALL HAVE MINIMUM EDGE DISTANCES AND CENTER-TO-CENTER SPACING OF 1-1/2 AND 3 SCREW DIAMETERS, RESPECTIVELY. ALL SCREWS SHALL CONFORM TO SAE J78 AND SHALL BE COATED WITH A CORROSIVE-RESISTANT COATING. THE SCREW MANUFACTURER SHALL PROVIDE VERIFICATION OF THE FASTENERS RESISTANCE TO HYDROGEN EMBRITTLEMENT, UPON REQUEST.

    H. WELDING OF COLD-FORMED METAL FRAMING SHALL CONFORM TO AWS D1.3 AND SHALL BE PERFORMED BY WABO CERTIFIED WELDERS QUALIFIED TO PRODUCE THE SPECIFIED CLASSES OF WELD.

    I. WALL FRAMING: REFER ARCHITECTURAL DRAWINGS FOR ALL STUD WALLS NOT SHOWN. EXTERIOR WALL STUDS SHALL BE MINIMUM 20 GAUGE (33 MILS) SPACED AT 16" O.C. UNLESS INDICATED OTHERWISE. TWO STUDS MINIMUM SHALL BE PROVIDED AT THE END OF ALL WALLS AND AT EACH SIDE OF ALL OPENINGS. TWO 800S162-54 HEADERS SHALL BE PROVIDED OVER ALL OPENINGS NOT OTHERWISE NOTED. SOLID BLOCKING FOR MULTI-STUD OR STEEL COLUMNS SHALL BE PROVIDED THROUGH FLOORS TO SUPPORTS BELOW. PROVIDE CONTINUOUS FULL WIDTH BLOCKING AT MID-HEIGHT OF ALL STUD WALLS OVER 10' IN HEIGHT.

    J. ALL STUD WALLS SHALL HAVE THEIR BOTTOM TRACKS ATTACHED TO FRAMING BELOW WITH #8 SCREWS AT 24" O.C. OR ATTACHED TO CONCRETE WITH 0.145" DIAMETER DRIVE-PINS @ 24" O.C. UNLESS INDICATED OTHERWISE. INDIVIDUAL MEMBERS OF BUILT-UP POSTS SHALL BE WELDED TO EACH OTHER IN ACCORDANCE WITH THE DETAILS. REFER TO THE PLANS AND SHEAR WALL SCHEDULE FOR REQUIRED SHEATHING AND STRAP BRACING. WHEN NOT OTHERWISE NOTED, PROVIDE GYPSUM WALLBOARD ON INTERIOR SURFACES AND GYPSUM SHEATHING ON EXTERIOR SURFACES SCREWED TO ALL STUDS, TOP AND BOTTOM TRACKS AND BLOCKING WITH SCREWS AT 12" O.C. TRACK SECTIONS SHALL MATCH THE WALL STUD GAUGE, BE UN-PUNCHED AND HAVE AT LEAST 1-1/4" FLANGES.

    K. BRIDGING AND BRACING IS TO BE INSTALLED AT ALL COLD FORMED STEEL BEARING WALLS. BRIDGING AND BRACING SHALL BE INSTALLED AS SHOWN ON THE STRUCTURAL PLANS, OR THE CONTRACTOR SHALL EMPLOY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF WASHINGTON TO DESIGN AN ALTERNATE BRACING SYSTEM. IF AN ALTERNATE BRACING SYSTEM IS USED, THE CONTRACTOR SHALL SUBMIT STAMPED DRAWINGS AND CALCULATIONS TO THE ENGINEER OF RECORD, WHICH DEMONSTRATES THAT THE BRACING SYSTEM WAS DESIGNED TO PROVIDE PERMANENT WEAK AXIS BRACING OF THE STUDS UNDER CODE PRESCRIBED LOADS. DOCUMENTATION SHALL BE SUBMITTED FOR REVIEW PRIOR TO CONSTRUCTION.

48. HEADED STUDS FOR COMPOSITE CONNECTION OF STRUCTURAL STEEL TO CAST-IN-PLACE CONCRETE SHALL BE MANUFACTURED FROM MATERIAL CONFORMING TO ASTM A-29, AND A-108 AND SHALL BE WELDED IN CONFORMANCE WITH A.W.S. D1.1.

49. DEFORMED BAR ANCHORS SHALL BE TYPE D2L ANCHORS BY NELSON STUD WELDING, INC. ANCHORS SHALL BE INSTALLED IN ACCORDANCE WITH ICC-ES ESR-2907.

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PROJECT TITLE:
Swift Center
Sedro Wooley, WA

ARCHITECT:
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ISSUE: Schematic Design

SHEET TITLE: General Structural Notes Continued

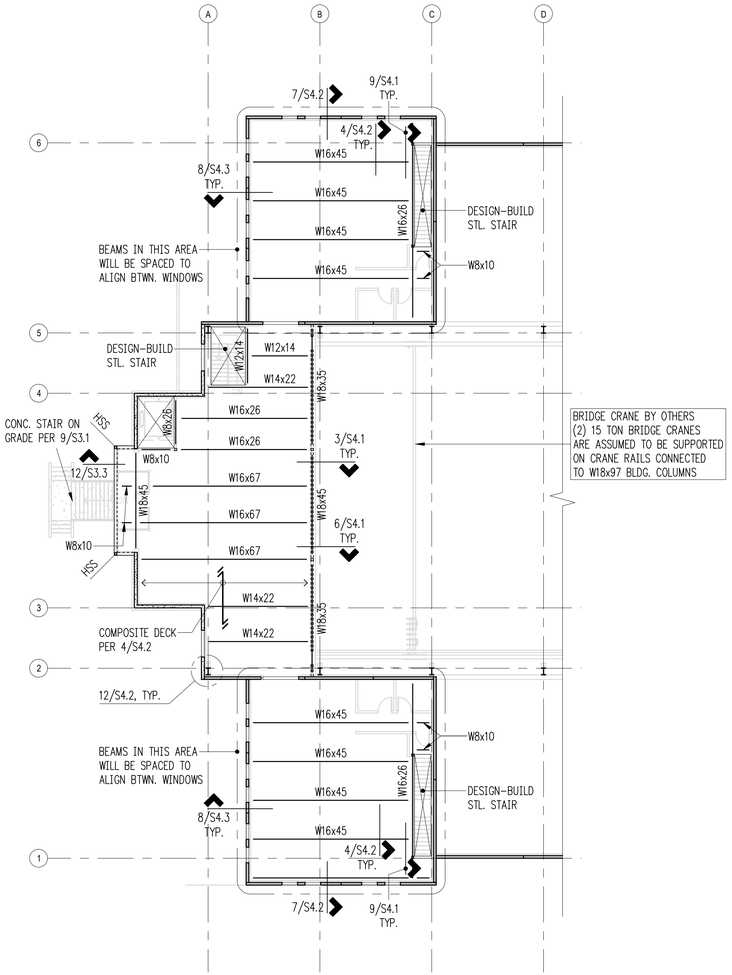
SCALE:

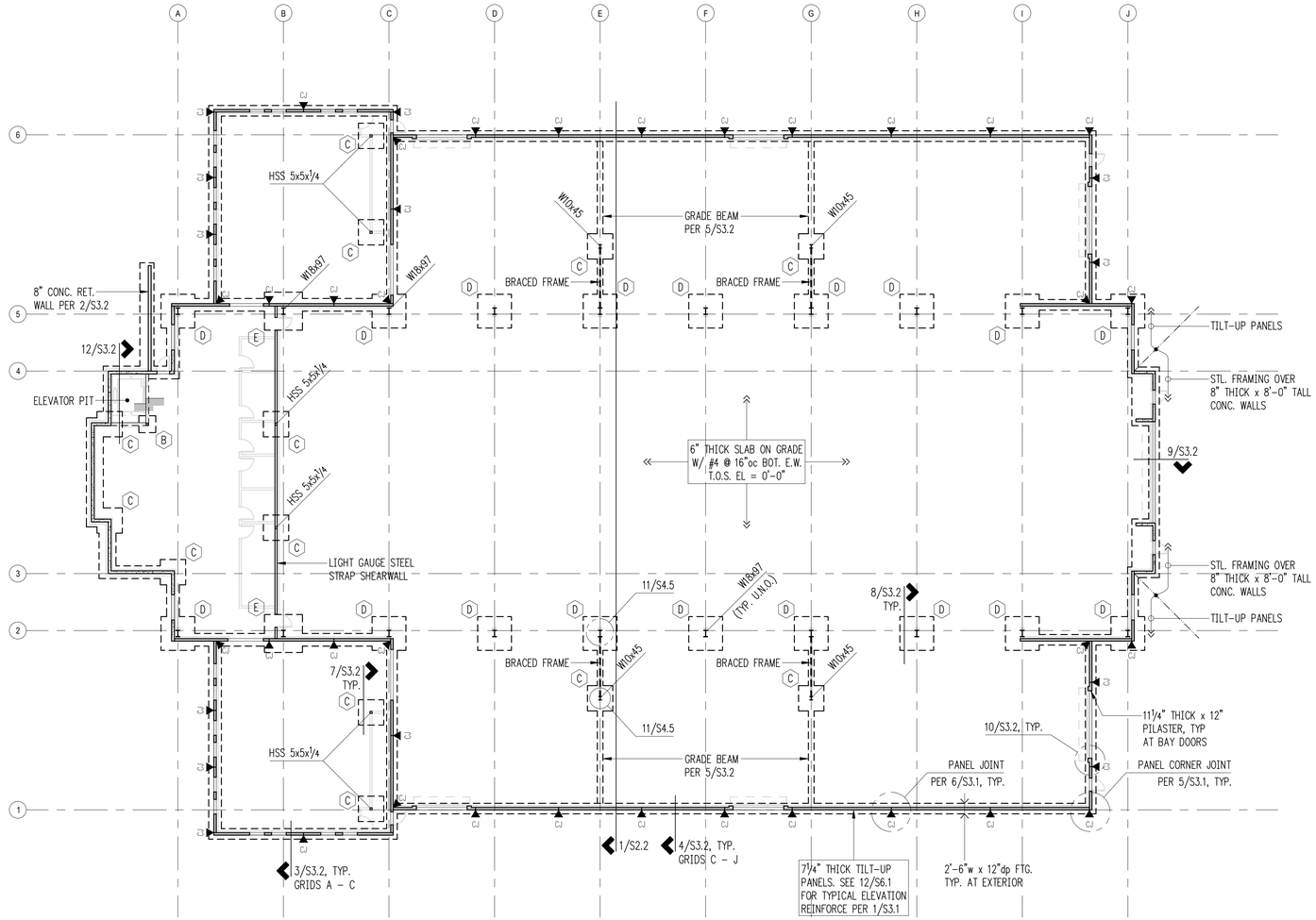
DATE: Sept. 2016

PROJECT NO: 10902-2016-03

SHEET NO: S1.2

NO: OF SHEETS:





Plan Notes

1. DO NOT SCALE THE DRAWINGS. REFER TO ARCHITECTURAL DRAWINGS FOR DIMENSIONS.
2. SEE SHEETS S3.1 AND S3.2 FOR TYPICAL CONCRETE DETAILS.
3. SEE SHEET S4.1 FOR TYPICAL STEEL FRAMING DETAILS.
4. SEE SHEET S4.2 FOR TYPICAL COMPOSITE DECK DETAILS.
5. SEE SHEETS S5.1 AND S5.2 FOR TYPICAL LIGHT GAUGE STEEL FRAMING DETAILS.
6. SEE SHEET S6.1 FOR TYPICAL TILT-UP WALL PANEL ELEVATION.
7. ALL LOCATIONS OF PENETRATIONS IN FLOOR DECK SHALL BE COORDINATED WITH MECHANICAL, ELECTRICAL AND ARCHITECTURAL DRAWINGS.
8. REFER TO GENERAL STRUCTURAL NOTES FOR ADDITIONAL REQUIREMENTS.

Upper Floor Framing Plan

Scale: 1/16"=1'-0"

Legend

- CAST-IN-PLACE CONCRETE WALL & FOUNDATION
- TILT-UP CONCRETE WALL & FOUNDATION
- LIGHT GAUGE STEEL STRAP SHEARWALL
- WALL BELOW

W14x22 (X) C=X"
BEAM SIZE — NO. OF STUDS — CAMBER

Plan Notes

1. DO NOT SCALE THE DRAWINGS. REFER TO ARCHITECTURAL DRAWINGS FOR DIMENSIONS.
2. THE BOTTOM OF ALL EXTERIOR FOOTINGS SHALL BE 18" MINIMUM BELOW GRADE.
3. ALL FOOTINGS SHALL BE FOUND ON UNDISTURBED NATIVE SOIL OR STRUCTURAL FILL PER GEOTECH.
4. PROVIDE CONTROL JOINTS IN SLABS ON GRADE PER 4/S3.1.
5. SEE SHEETS S3.1 AND S3.2 FOR TYPICAL CONCRETE DETAILS.
6. SEE SHEET S4.1 FOR STEEL COLUMN BASE PLATE CONNECTION DETAILS.
7. SEE SHEET S4.5 FOR BRACED FRAME COLUMN BASE PLATE DETAILS.
8. SEE SHEET S6.1 FOR TYPICAL TILT-UP WALL PANEL ELEVATION.
9. COORDINATE CONCRETE WALL OPENINGS LOCATIONS WITH ARCHITECTURAL DRAWINGS.
10. REFER TO GENERAL STRUCTURAL NOTES FOR ADDITIONAL REQUIREMENTS.

Footing Schedule

Mark	Size	Depth
A	3'-0"sq	12"
B	4'-0"sq	12"
C	6'-0"sq	12"
D	8'-0"sq	15"
E	9'-0"sq	18"
F	10'-0"sq	18"

Legend

- CAST-IN-PLACE CONCRETE WALL & FOUNDATION
- TILT-UP CONCRETE WALL & FOUNDATION
- LIGHT GAUGE STEEL STRAP SHEARWALL
- X'-X" — TOP OF FOOTING/GRADE BEAM ELEVATION
- CJ — PANEL WALL JOINT LOCATION
- X — FOOTING PER SCHEDULE

Foundation Plan

Scale: 1/16"=1'-0"

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DPD:

PROJECT TITLE:

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Sedro Wooley, WA

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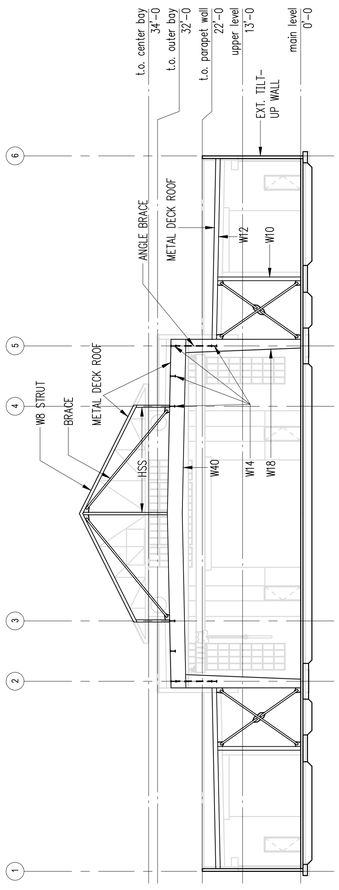
ISSUE: Schematic Design

SHEET TITLE: Foundation Plan & Upper Floor Framing Plan

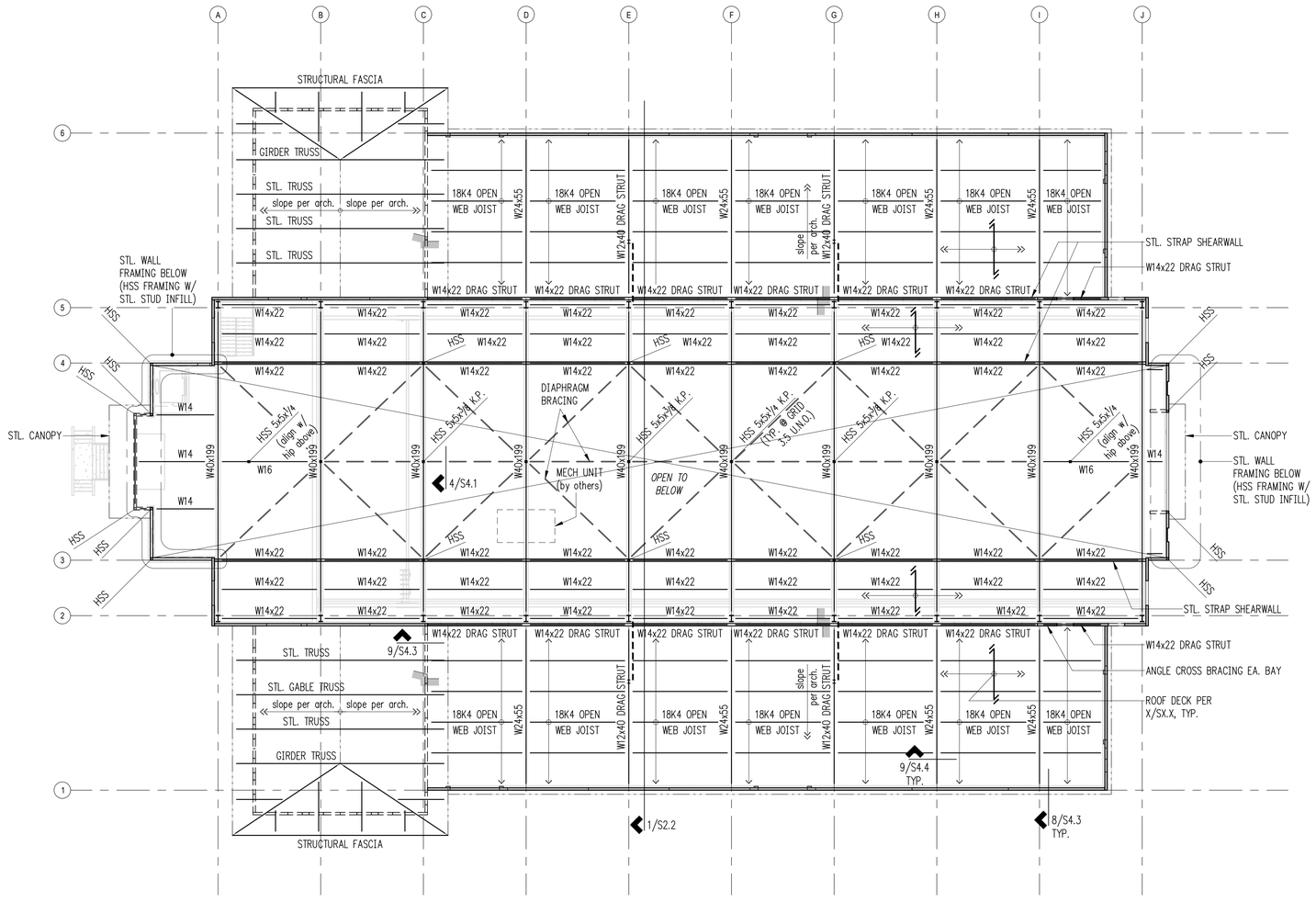
SCALE: 1/16" = 1'-0" U.N.O.
DATE: Sept. 2016
PROJECT NO: 10902-2016-03
SHEET NO: S2.1

NO: OF SHEETS:



Schematic Building Section

Scale: 1/16" = 1'-0"



Low Roof Framing Plan

Scale: 1/16"=1'-0"

Plan Notes

1. DO NOT SCALE THE DRAWINGS. REFER TO ARCHITECTURAL DRAWINGS FOR DIMENSIONS.
2. SEE SHEET S4.1 FOR TYPICAL STEEL FRAMING DETAILS.
3. SEE SHEET S4.4 FOR TYPICAL OPEN-WEB JOIST AND ROOF DECK FRAMING DETAILS.
4. SEE SHEET S4.5 FOR BRACED FRAME DETAILS.
5. SEE SHEETS S5.1 AND S5.2 FOR TYPICAL LIGHT GAUGE STEEL FRAMING DETAILS.
6. SEE SHEET S6.1 FOR TYPICAL TILT-UP WALL PANEL ELEVATION.
7. ALL LOCATIONS OF PENETRATIONS IN ROOF DECK SHALL BE COORDINATED WITH MECHANICAL, ELECTRICAL AND ARCHITECTURAL DRAWINGS.
8. COORDINATE MECHANICAL UNIT LOCATIONS WITH MECHANICAL DRAWINGS.
9. REFER TO GENERAL STRUCTURAL NOTES FOR ADDITIONAL REQUIREMENTS.

Legend

- TILT-UP CONCRETE WALL
- LIGHT GAUGE STUD WALL
- ROOF DECK & EXTENTS
- WALL BELOW
- K.P. KING POST
- DIAPHRAGM CROSS BRACING HSS 6x6
- BRACED FRAME BELOW

SSF STRUCTURAL ENGINEERING
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Swift Center
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ISSUE: Schematic Design

SHEET TITLE: Low Roof Framing Plan

SCALE: 1/16" = 1'-0" U.N.O.
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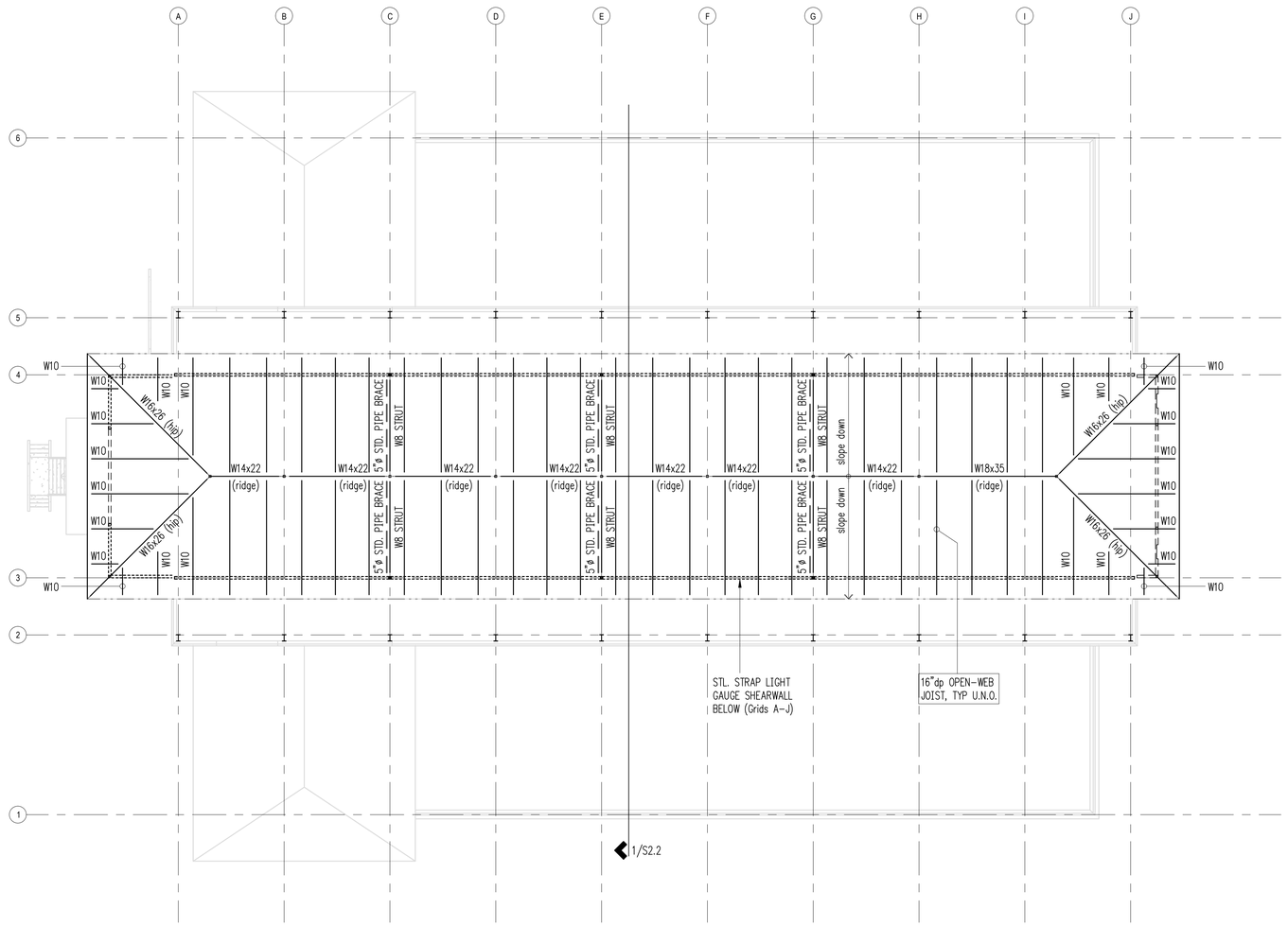
PROJECT NO: 10902-2016-03
SHEET NO: S2.2

NO: OF SHEETS:



Plan Notes

1. DO NOT SCALE THE DRAWINGS. REFER TO ARCHITECTURAL DRAWINGS FOR DIMENSIONS.
2. TYPICAL FRAMING CONSISTS OF METAL DECK OVER 16" DEEP OPEN-WEB JOISTS OR W10 WIDE FLANGE BEAMS @ 8'-0"oc.
3. SEE SHEET S4.1 FOR TYPICAL STEEL FRAMING DETAILS.
4. SEE SHEET S4.4 FOR TYPICAL OPEN-WEB JOIST AND ROOF DECK FRAMING DETAILS.
5. SEE SHEETS S5.1 AND S5.2 FOR TYPICAL LIGHT GAUGE STEEL FRAMING DETAILS.
6. ALL LOCATIONS OF PENETRATIONS IN ROOF DECK SHALL BE COORDINATED WITH MECHANICAL, ELECTRICAL AND ARCHITECTURAL DRAWINGS.
7. COORDINATE MECHANICAL UNIT LOCATIONS WITH MECHANICAL DRAWINGS.
8. REFER TO GENERAL STRUCTURAL NOTES FOR ADDITIONAL REQUIREMENTS.

Legend

ROOF DECK & EXTENTS

WALL BELOW

High Roof Framing Plan

Scale: 1/16"=1'-0"

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ISSUE: Schematic Design

SHEET TITLE: High Roof Framing Plan

SCALE: 1/16" = 1'-0" U.N.O.
DATE: Sept. 2016
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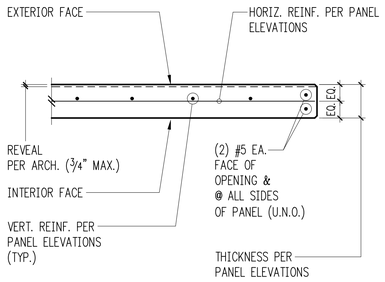
SHEET NO: S2.3

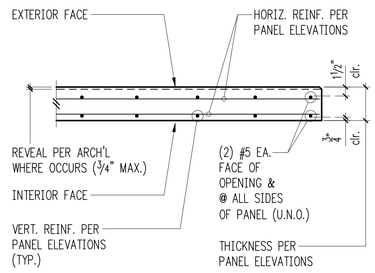
NO: OF SHEETS:



SINGLE MAT REINFORCING PLACEMENT

TILT-UP PANEL

1



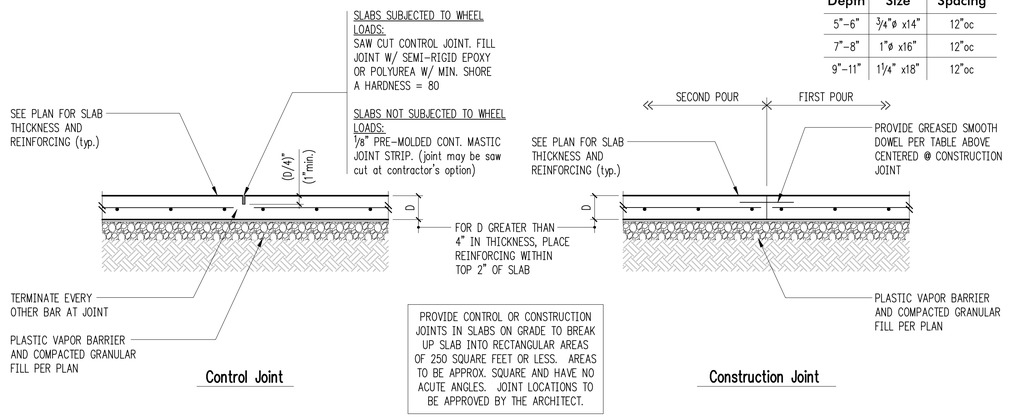
DOUBLE MAT REINFORCING PLACEMENT

TILT-UP PANEL

2

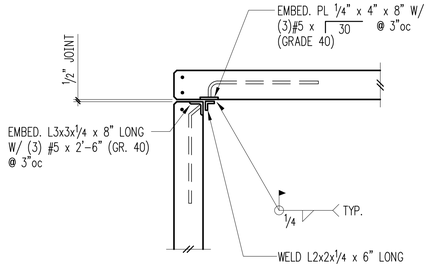
Table

Slab Depth	Dowel Size	Dowel Spacing
5"–6"	3/4"ø x14"	12"oc
7"–8"	1"ø x16"	12"oc
9"–11"	1¼" x18"	12"oc



Typical Slab Joints (rebar)

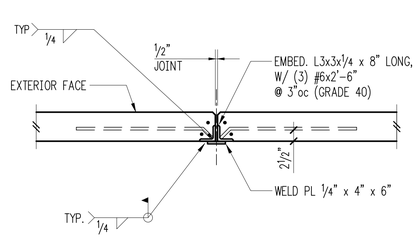
4



PLAN VIEW

Typical Corner Tilt-Up Panel Joint

5



PLAN VIEW

Typical Tilt-Up Panel Joint

6

Reinforcing Splice and Development Length Schedule

For f'c = 3000 psi, Grade 60 Reinforcing

(I) Minimum Straight Development Length (ℓd)

Bar Size	Top Bars	Other Bars
#3	22"	17"
#4	29"	22"
#5	36"	28"
#6	43"	33"
#7	63"	48"
#8	72"	55"
#9	81"	62"
#10	91"	70"
#11	101"	78"

(II) Minimum Lap Splice Lengths (ℓs)

Bar Size	Top Bars	Other Bars
#3	28"	22"
#4	37"	29"
#5	47"	36"
#6	56"	43"
#7	81"	63"
#8	93"	72"
#9	105"	81"
#10	118"	91"
#11	131"	101"

TOP BARS ARE HORIZONTAL BARS WITH MORE THAN 12" DEPTH OF CONCRETE CAST BELOW THEM.

IF CLEAR CONCRETE COVER IS NOT GREATER THAN THE DIAMETER OF THE BAR, OR THE CENTER TO CENTER SPACING IS NOT GREATER THAN 3 BAR DIAMETERS, THEN LENGTHS SHALL BE INCREASED BY 50%

(III) Minimum Embedment Lengths (ℓdh) For Standard End Hooks

Bar Size	Length
#3	6"
#4	8"
#5	10"
#6	12"
#7	14"
#8	16"
#9	18"
#10	20"
#11	22"

1. SIDE COVER MUST BE EQUAL TO OR GREATER THAN 2½"
2. END COVER FOR 90° HOOKS MUST BE EQUAL TO OR GREATER THAN 2"

Reinforcing Splice Length & Development Length (3000psi)

11

Reinforcing Splice and Development Length Schedule

For f'c = 4000 psi, Grade 60 Reinforcing

(I) Minimum Straight Development Length (ℓd)

Bar Size	Top Bars	Other Bars
#3	19"	15"
#4	25"	19"
#5	31"	24"
#6	37"	29"
#7	54"	42"
#8	62"	48"
#9	70"	54"
#10	79"	61"
#11	87"	67"

(II) Minimum Lap Splice Lengths (ℓs)

Bar Size	Top Bars	Other Bars
#3	24"	19"
#4	32"	25"
#5	40"	31"
#6	48"	37"
#7	70"	54"
#8	81"	62"
#9	91"	70"
#10	102"	79"
#11	113"	87"

TOP BARS ARE HORIZONTAL BARS WITH MORE THAN 12" DEPTH OF CONCRETE CAST BELOW THEM.

IF CLEAR CONCRETE COVER IS NOT GREATER THAN THE DIAMETER OF THE BAR, OR THE CENTER TO CENTER SPACING IS NOT GREATER THAN 3 BAR DIAMETERS, THEN LENGTHS SHALL BE INCREASED BY 50%

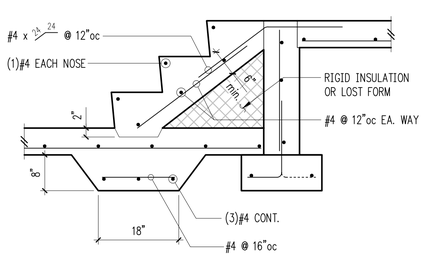
(III) Minimum Embedment Lengths (ℓdh) For Standard End Hooks

Bar Size	Length
#3	6"
#4	7"
#5	9"
#6	10"
#7	12"
#8	14"
#9	15"
#10	17"
#11	19"

1. SIDE COVER MUST BE EQUAL TO OR GREATER THAN 2½"
2. END COVER FOR 90° HOOKS MUST BE EQUAL TO OR GREATER THAN 2"

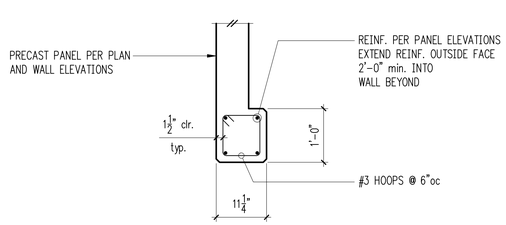
Reinforcing Splice Length & Development Length (4000psi)

12



Typical Stair On Grade

9



Typical Pilaster

10

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DPD:

PROJECT TITLE:

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ISSUE: Schematic Design

SHEET TITLE: Typical Concrete Details

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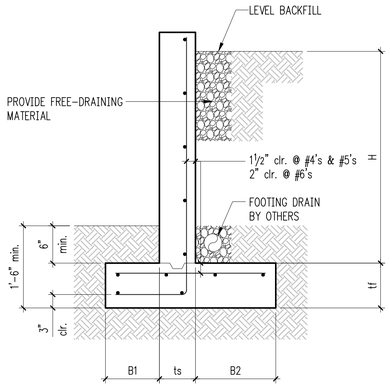
SHEET NO: S3.1

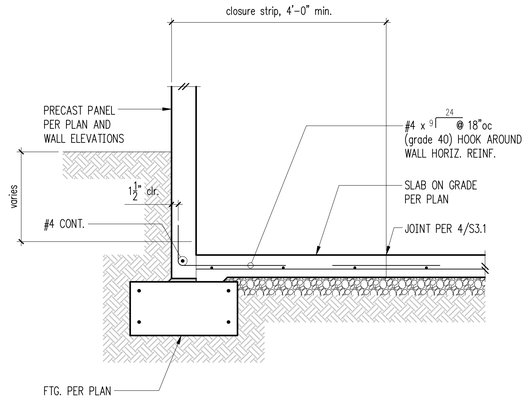
NO: OF SHEETS:



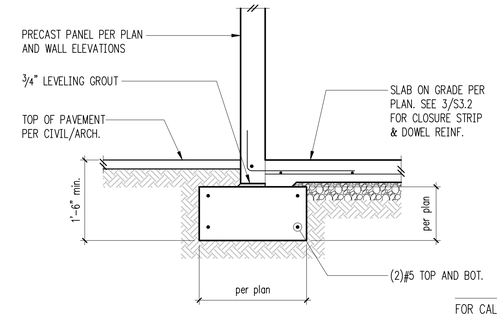
Retaining Wall Schedule

H (ft.)	B1	ts	B2	tf	Stem Reinforcing		Footing Reinforcing	
					Vert.	Horiz.	Top	Longit.
3'-0"	5"	8"	5"	8"	#4 @ 18"oc	#4 @ 12"oc	–	(2)#4
4'-0"	5"	8"	1'-0"	8"	#4 @ 18"oc	#4 @ 12"oc	#4 @ 18"oc	(2)#4
6'-0"	5"	8"	2'-3"	10"	#4 @ 12"oc	#4 @ 12"oc	#4 @ 12"oc	(4)#4
8'-0"	1'-0"	8"	2'-9"	12"	#5 @ 12"oc	#4 @ 12"oc	#5 @ 12"oc	(5)#5
10'-0"	1'-9"	8"	3'-9"	18"	#7 @ 12"oc	#4 @ 12"oc	#6 @ 12"oc	(8)#5

2



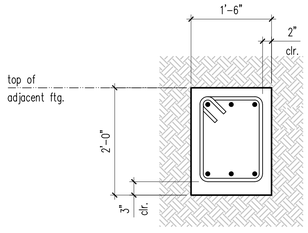
Grids A – C
Typical Exterior Precast Wall Footing 3



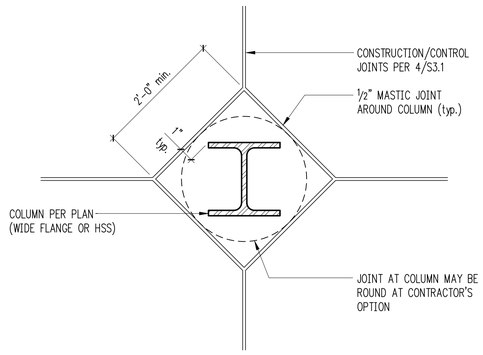
Grids C – J
Typical Exterior Precast Wall Footing 4

NOTES:

1. SEE PLANS FOR GRADE BEAM LOCATIONS.
2. DEVELOP OR DOWEL AND LAP SPLICE GRADE BEAM LONGITUDINAL BARS TO PILE CAPS.
3. TOPS OF GRADE BEAMS AND PILE CAPS SHALL MATCH. SLOPE GRADE BEAMS WHERE REQUIRED.

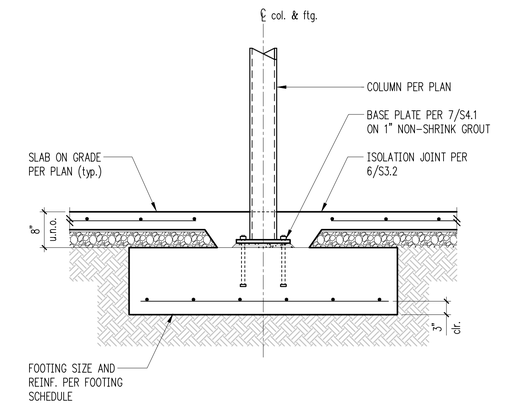


Typical Grade Beam 5

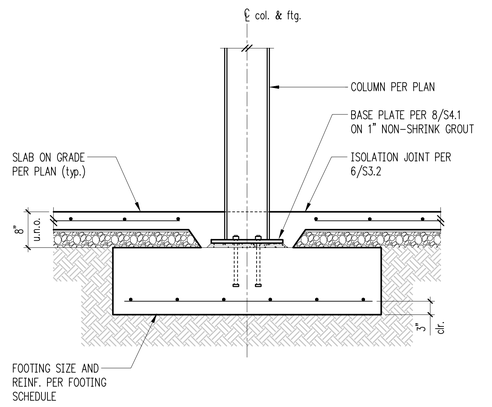


Plan View

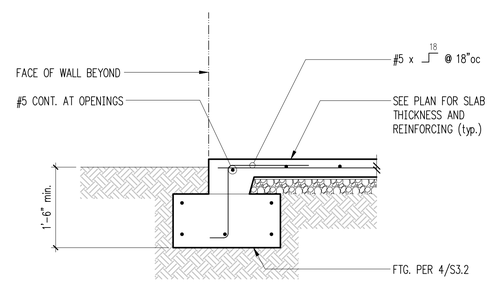
Typical Slab Isolation Joint 6



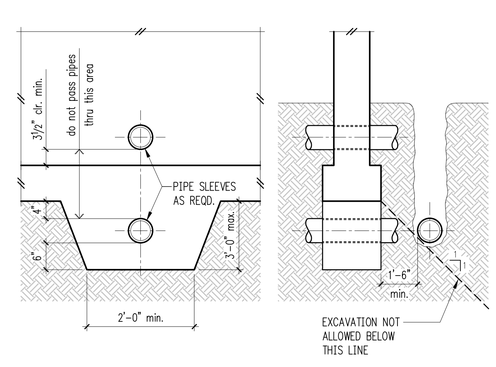
Typical Interior HSS Column Footing 7



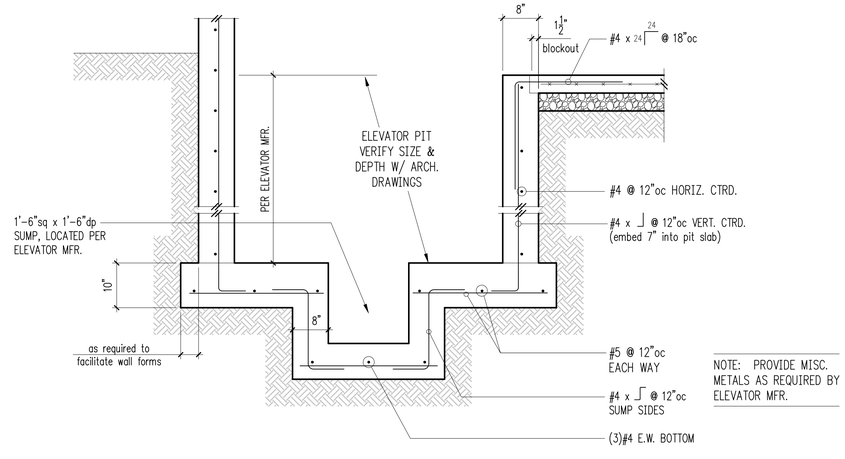
Typical Interior Column Footing 8



Typical Turned-Down Slab Edge 9



Pipe and Trench Locations 10



Typical Elevator Pit w/ Sump 12

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DESIGN: SWJ
CHECKED: RGC
APPROVED: RGC

REVISIONS:

DPD:

PROJECT TITLE:

Swift Center
Sedro Wooley, WA

ARCHITECT:
RMC Architects
1223 Railroad Ave
Bellingham, WA 98225
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ISSUE: Schematic Design

SHEET TITLE: Typical Concrete Details

SCALE: 3/4" = 1'-0" U.N.O.
DATE: Sept. 2016
PROJECT NO: 10902-2016-03
SHEET NO: S3.2

NO: OF SHEETS:

1

2

3

4

5

6

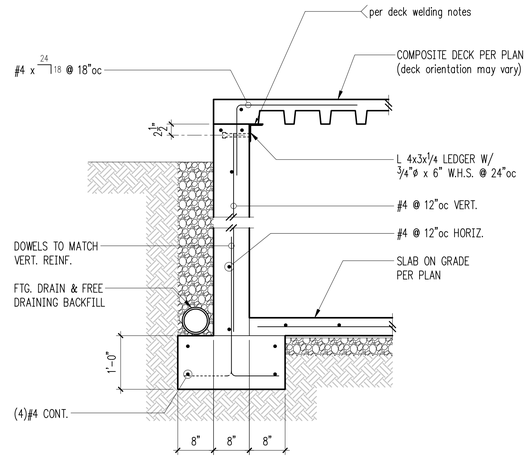
7

8

9

10

11



Typical Section Thru Cast-in-Place Wall at North Entry 12

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DRAWN: SJB

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APPROVED: RGC

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ISSUE:

Schematic Design

SHEET TITLE:

Typical Concrete Details

SCALE: 3/4" = 1'-0" U.N.O.

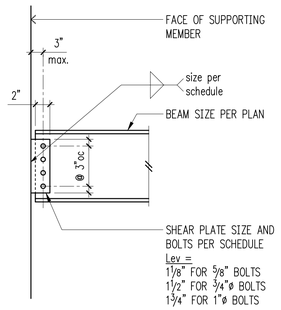
DATE: Sept. 2016

PROJECT NO: 10902-2016-03

SHEET NO:

S3.3

NO: OF SHEETS:



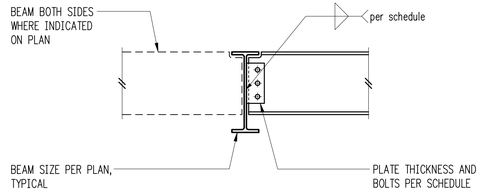
Shear Plate Schedule

Beam Size	No. of Bolts	Bolt Size	Plate Thickness	Weld Size
W8, W10	2	¾"ø	¼"	3/16"
W12	3	¾"ø	¼"	3/16"
W14	3	¾"ø	¼"	3/16"
W16	4	¾"ø	¼"	3/16"
W18	5	¾"ø	¼"	3/16"
W21	5	¾"ø	⅜"	5/16"
W24	6	¾"ø	⅜"	5/16"
W27	7	¾"ø	⅜"	5/16"
W30	8	¾"ø	⅜"	5/16"

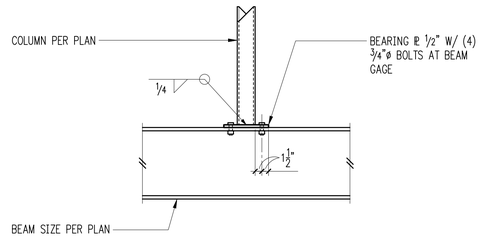
NOTES:

1. STANDARD OR SLOTTED HOLES MAY BE USED.
2. BOLT TYPE A325N.
3. ℄ MATERIAL – A36
4. SEE EXTENDED ℄ DETAIL FOR COLUMN WEB CONNECTIONS.

Typical Single Shear Plate Connection and Schedule **2**

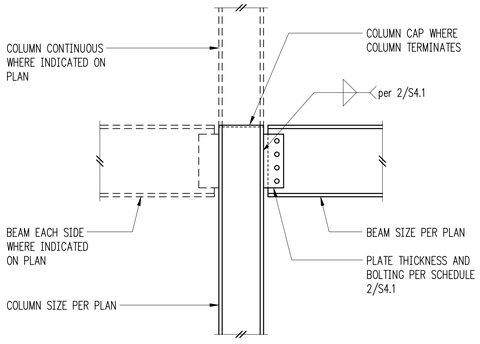


Typical Beam to Beam Connection **3**

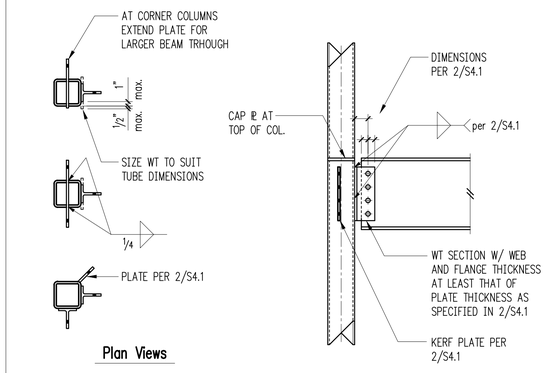


NOTE:
BEARING PLATE THICKNESS SHALL BE ¾" WHERE DEPTH OF BEAM MEMBER EXCEEDS 24"

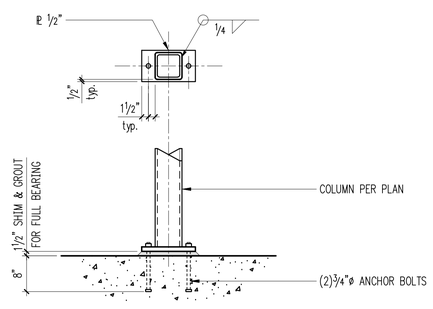
Beam Supporting HSS or Pipe Column **4**



Beam to Column Flange Connection **5**

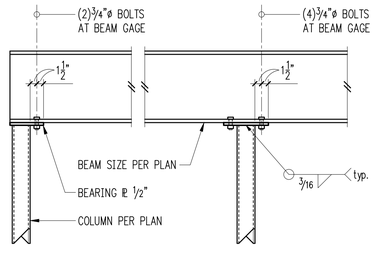


HSS Column Connection **6**



Baseplate - HSS Column **7**

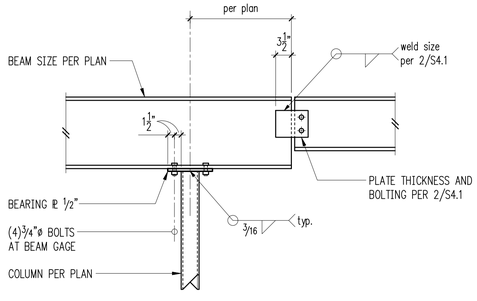
Baseplate - WF Columns **8**



Where Beam Stops Where Beam Continues

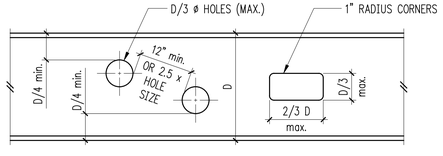
NOTE:
BEARING PLATE THICKNESS SHALL BE ¾" WHERE DEPTH OF SUPPORTED MEMBER EXCEEDS 24"

Typical Beam Bearing on HSS or Pipe Column **9**



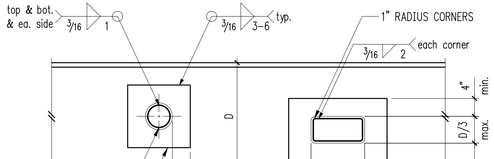
NOTE:
BEARING PLATE THICKNESS SHALL BE ¾" WHERE DEPTH OF SUPPORTED MEMBER EXCEEDS 24"

Beam Bearing on HSS or Pipe Column **10**



1. CONTRACTOR SHALL COORDINATE SIZES AND LOCATIONS OF ALL BEAM PENETRATIONS WITH MECHANICAL DRAWINGS. ALL PENETRATIONS LARGER THAN 2"ø SHALL BE SHOWN ON SHOP DRAWINGS OR SKETCHES AND SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL. FIELD CUTTING NOT PERMITTED WITHOUT APPROVAL.
2. OPENINGS MAY OCCUR IN MIDDLE HALF OF BEAM LENGTH ONLY.
3. NO CUTTING MAY OCCUR IN TOP OR BOTTOM QUARTER OF BEAM DEPTH.
4. ADJACENT OPENINGS MUST BE SPACED AT THE LESSER OF, 12" OR 2.5 x LARGER OPENING SIZE, EDGE TO EDGE.
5. MAXIMUM SIZES OF OPENINGS SHALL BE D/3 ø OR D/3 x 2D/3 AS SHOWN.
6. NO OPENINGS SHALL OCCUR WITHIN 12" OF AN ADJACENT BEAM CONNECTION.
7. REQUIRED OPENINGS NOT MEETING ABOVE CRITERIA SHALL BE SUBMITTED TO ENGINEER FOR REINFORCING DESIGN.

Steel Beam Penetrations **11**



1. PENETRATIONS MUST MEET CRITERIA NOTES 1, 3, 4, 5, AND 6 OF TYPICAL STEEL BEAM PENETRATION DETAIL – SEE 11/S4.1.
2. EDGE OF OPENING SHALL BE A MINIMUM OF 16" CLEAR FROM EDGE OF BEAM CONNECTION PLATE.

Doubler Plate Reinforced Beam Penetrations **12**

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REVISIONS:

DPD:

PROJECT TITLE:

Swift Center
Sedro Wooley, WA

ARCHITECT:
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1223 Railroad Ave
Bellingham, WA 98225
PH 360.676.7733

ISSUE:
Schematic Design

SHEET TITLE:
Typical Steel Framing Details

SCALE: 3/4" = 1'-0" U.N.O.
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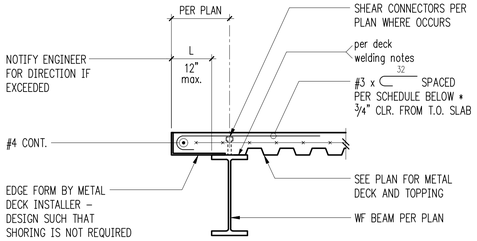


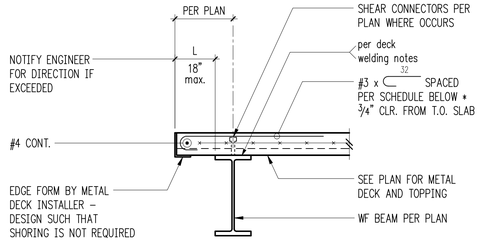
Spacing Schedule

L ≤ 4½" *	OMIT #3 BARS
4½" < L ≤ 8"	32"oc
8" < L ≤ 12"	24"oc

NOTES:

- REFER TO 6/S4.2 FOR SPECIAL REINFORCING CONDITIONS

Cantilevered Floor Deck Parallel to Beam 1



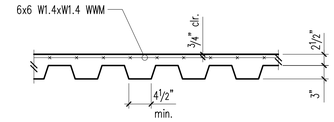
Spacing Schedule

L ≤ 6" *	OMIT #3 BARS
6" < L ≤ 10"	32"oc
10" < L ≤ 18"	24"oc

NOTES:

- REFER TO 6/S4.2 FOR SPECIAL REINFORCING CONDITIONS

Cantilevered Floor Deck Perpendicular to Beam 2



Verco W3 Formlock, G60 Coating w/Following Min. Properties

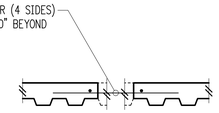
	20 GA.
PANEL WIDTH = 36"	I = .896 in.⁴ S = .534 in.³ Fy = 38 ksi min.

SHEAR CAPACITY REQ'D = X #/LF

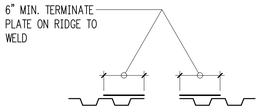
1. MAXIMUM DECK SPAN = 11'-0" c. TO c. UNLESS SHORED AT MIDSPAN. BASED ON TRIPLE SPAN, UNSHORED CONDITIONS.
2. PROVIDE (4)½" DIAMETER EFFECTIVE PUDDLE WELDS PER SHEET TO ALL SUPPORTS PERPENDICULAR TO DECK FLUTES.
3. PROVIDE ½" DIAMETER PUDDLE WELDS AT 12"oc TO ALL WALL LEDGERS. PROVIDE ½" DIAMETER PUDDLE WELDS AT 6"oc TO ALL BEAMS MARKED STRUT. PROVIDE ½" DIAMETER PUDDLE WELDS AT 12"oc WHERE DECK ORIENTATION CHANGES AND OTHER SUPPORTS PARALLEL TO DECK FLUTES.
4. CONNECT DECK SEAMS WITH BUTTON PUNCHES @ 18"oc.
5. DECK TYPE MUST STRICTLY MEET CRITERIA LISTED ABOVE INCLUDING I.C.B.O. RESEARCH REPORT ALLOWABLE SHEAR LOADS. SUBMIT DECK INFORMATION TO ENGINEER PRIOR TO BEGINNING SHOP DRAWINGS.
6. REINFORCE DECK OPENINGS PER 6/S4.2 & 10/S4.2.
7. AT CONTRACTORS OPTION, .145"ø DRIVE PINS OR SDI RECOGNIZED #10 SELF DRILLING SCREWS MAY BE SUBSTITUTED AT SUPPORTS AND SIDELAP CONNECTIONS .

3" + 2 1/2" Floor Deck 4

1. FOR HOLES 4" DIA. OR LESS OR 4" SQUARE OR LESS:
   NO STRENGTHENING IS REQUIRED PROVIDED THAT HOLES ARE NOT CLOSER THAN 12"oc
2. FOR HOLES GREATER THAN 4" UP TO 8" DIA. OR 8" SQUARE:
   PROVIDED HOLES ARE NOT CLOSER THAN 3'-0"oc

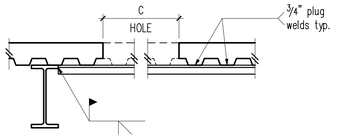


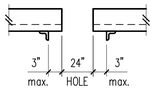
Section at Deck With Concrete Fill

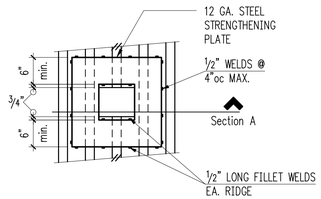


Section A

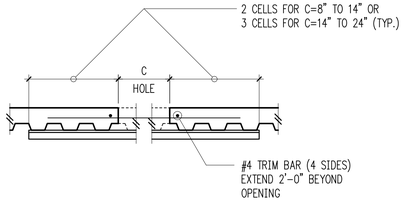
3. FOR HOLES GREATER THAN 8" UP TO 24" DIA. OR 24" SQUARE:
   PROVIDE L 2x2x3/16 AS SHOWN BELOW:



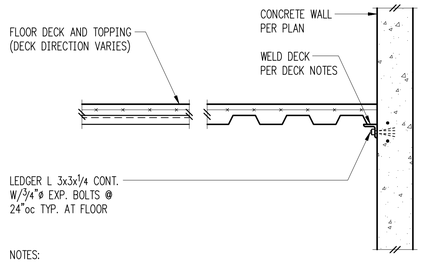




Square or Round Holes of Deck Without Concrete Fill



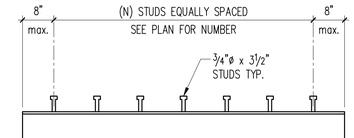
Floor Deck Reinforcement at Small Openings 6



NOTES:

- 3/4"ø A307 ANCHOR BOLTS MAY BE SUBSTITUTED ON AN EQUAL BASIS WITH EXP. BOLTS
- TYPICAL DECK LEDGER TO OCCUR AT ALL INTERSECTIONS OF FLOOR DECK AND CONCRETE WALLS, U.O.N.
- COORDINATE BOLT LOCATIONS W/ WALL REINF, LAYOUT.

Typical Deck Ledger 7

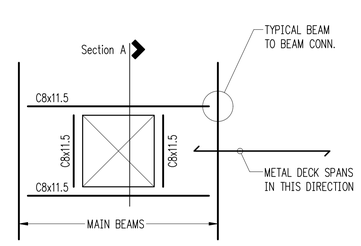


Typical Beam & Girder

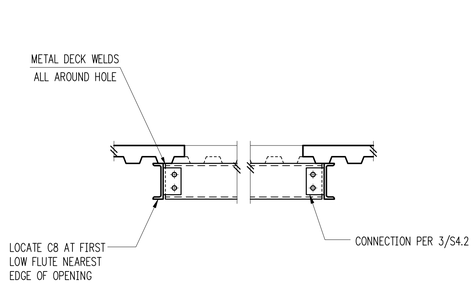
NOTES:

- NUMBER OF SHEAR CONNECTORS (STUDS) REQUIRED FOR COMPOSITE BEAMS ARE DESIGNATED (N) ON PLANS
- CENTER CONNECTORS OVER BEAMS AND GIRDERS TYPICAL
- WHERE DECK FLUTES ARE PERPENDICULAR TO BEAMS USE (2) STUDS PER FLUTE @ 3"oc WHERE NUMBER OF STUDS EXCEEDS NUMBER OF FLUTES

Stud Distribution at Composite Beams 8



Partial Plan

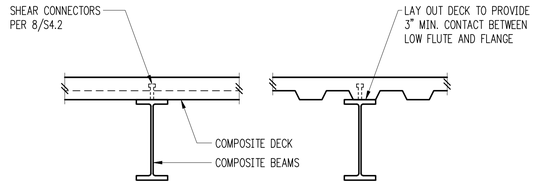


Section A

NOTES:

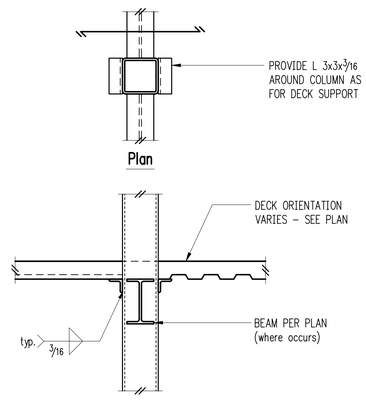
- WELD DECK TO MEMBERS WITH ½" DIA. PUDDLE WELDS @ 6"oc ALL AROUND
- FOR HOLES GREATER THAN 24"ø OR 24" SQ. – U.O.N. ON PLAN

Floor Deck Reinforcement at Large Openings 10



Perpendicular Parallel

Composite Beam to Deck Connections 11



Elevation

Floor Deck Support at Columns 12

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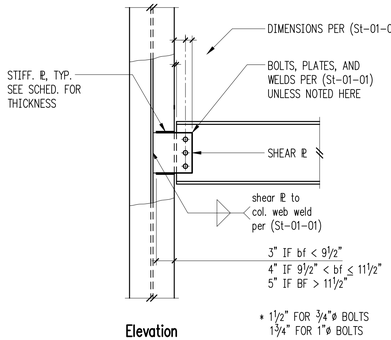
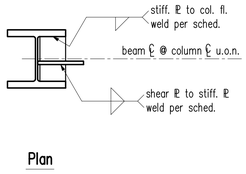
NO: OF SHEETS:

Shear & Stiffener Plate Schedule

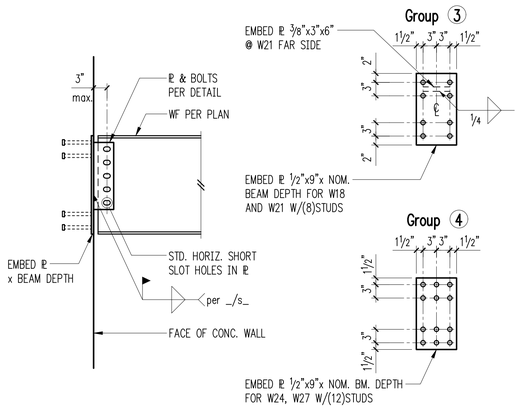
Beam Size	Stiff. Plate Thickness	Shear Plate to Col. Web Weld	Shear Plate to Stiff. Weld	Stiff. to Col. Flange Weld
W6	1/4"	3/16"	3/16"	3/16"
W8, W10	1/4"	3/16"	3/16"	3/16"
W12, W14	1/4"	3/16"	3/16"	3/16"
W16	1/4"	3/16"	3/16"	3/16"
W18	3/8"	3/16"	3/16"	3/16"
W21	1/2"	5/16"	5/16"	3/16"
W24	5/8"	5/16"	5/16"	1/4"
W27	5/8"	1/4"	1/4"	1/4"
W30	7/8"	1/4"	1/4"	5/16"

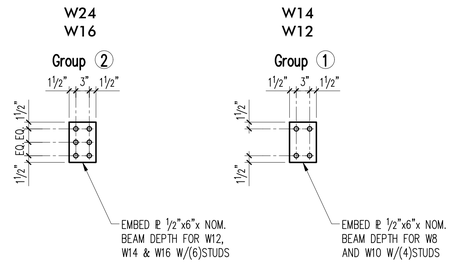


Elevation



Plan



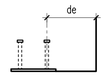


NOTES:

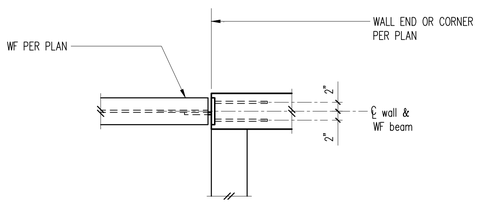
- ALL STUDS TO BE 3/4"ø x 5" U.O.N.
- DISTANCE FROM EDGE OF CONCRETE TO CENTER OF NEAREST STUD SHALL BE A MINIMUM OF 6" HORIZONTALLY AND 7 1/2" VERTICALLY
- PLACE EMBEDDED PLATE IN WALL SUCH THAT ATTACHED PLATE WILL BE VERTICALLY CENTERED

Minimum de Assumed

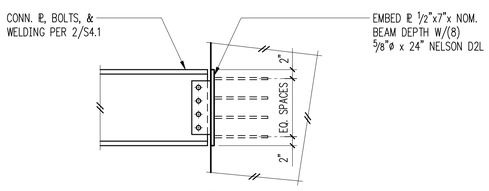
	3/4"ø x 5"	5/8"ø x 5"	1/2"ø x 5"
Horizontal	6"	6"	6"
Vertical	7 1/2"	5"	7"



Headed Stud Embed Plates



Plan



Section

Bar Anchor Embed Plates

STRUCTURAL ENGINEERING
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DRAWN: SJB
DESIGN: SWJ
CHECKED: RGC
APPROVED: RGC

REVISIONS:

DPD:

PROJECT TITLE:

Swift Center
Sedro Wooley, WA

ARCHITECT:
RMC Architects
1223 Railroad Ave
Bellingham, WA 98225
PH 360.676.7733

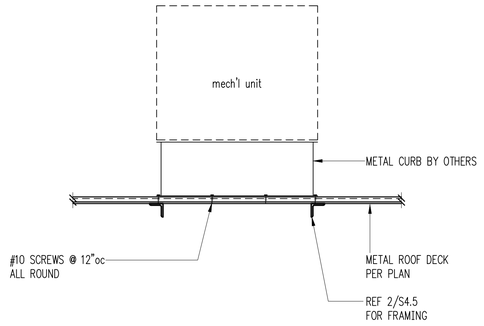
ISSUE:
Schematic Design

SHEET TITLE:
Typical Steel Details

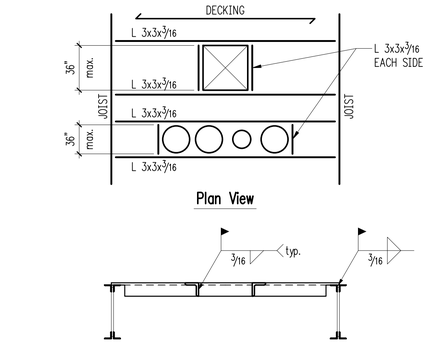
SCALE: 3/4" = 1'-0" U.N.O.
DATE: Sept. 2016
PROJECT NO: 10902-2016-03
SHEET NO:

S4.3

NO: OF SHEETS:



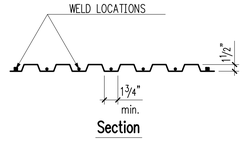
Typical Rooftop Unit Connection 1



NOTES:

- WELD DECK TO ANGLES W/ ½"ø PUDDLE WELDS @ 6"oc ALL AROUND
- NO REINFORCING IS REQUIRED FOR SINGLE OPENINGS 4"ø OR 4" SQ. OR LESS
- LARGER OPENINGS MUST BE COORDINATED W/ARCHITECT & ENGINEER

Roof Deck Reinforcement at Openings 2



Verco HSB-36, G60 Galvanized w/Following Min. Properties

SHEAR CAPACITY REQ'D = 1000 #/ft

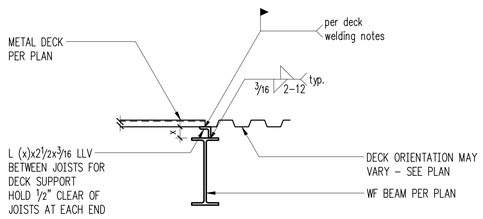
20 GA.

I = +0.219/−0.231 in.^{4}
S = +0.230/−0.237 in.^{3}
Fy = 50 ksi

• = ½"ø PUDDLE WELD
■ = ⅜"x1" ARC SEAM WELD

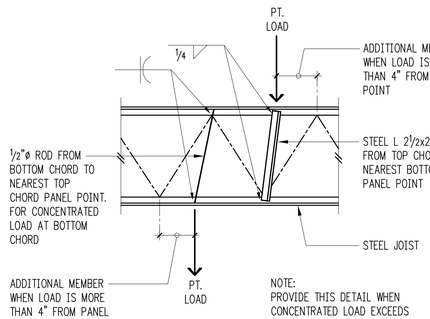
1. MAXIMUM DECK SPAN = 8'−0" c. TO c. (TWO OR MORE CONTINUOUS SPANS). USE HEAVIER GAGE WHERE DECK REQD. TO SIMPLE SPAN OVER 7'−0" c. TO c. (7'−0" MAX. SPAN CONFORMS TO U.L. FIRE RATING)
2. PROVIDE WELDS PER SECTION TO ALL SUPPORTS PERPENDICULAR TO DECK FLUTES.
3. PROVIDE ½" DIAMETER PUDDLE WELDS AT 4"oc TO ALL STRUTS PARALLEL TO DECK FLUTES AND TO BRACED FRAME BEAMS. PROVIDE ½" DIAMETER PUDDLE WELDS @ 12"oc WHERE DECK ORIENTATION CHANGES AND OTHER SUPPORTS PARALLEL TO DECK FLUTES.
4. CONNECT DECK SEAMS WITH BUTTON PUNCHES @ 18"oc.
5. DECK TYPE MUST STRICTLY MEET CRITERIA LISTED ABOVE INCLUDING RESEARCH REPORT ALLOWABLE SHEAR LOADS. SUBMIT DECK INFORMATION TO ENGINEER PRIOR TO BEGINNING SHOP DRAWINGS.
6. REINFORCE DECK OPENINGS PER 12/S4.3

1 1/2" Roof Deck 4



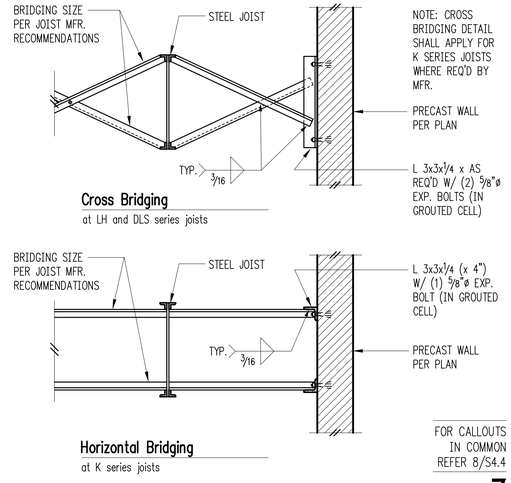
1. FILLER ANGLE REQUIRED FOR BEAMS DENOTED "STRUT" (ON PLAN) AND ONLY FOR THOSE SET DOWN FOR JOIST SUPPORT.
2. FILLER ANGLE ALSO REQUIRED WHERE DECK ORIENTATION CHANGES.
3. WHERE HIP AND/OR VALLEYS OCCUR, PROVIDE EQUIVALENT FILLERS, FABRICATED IN SHAPES NECESSARY FOR DECK SEATING AND WELDING.
4. DIMENSION "X" = OWJ BEARING DEPTH

Filler Connection at OWSJ Support Beams 5

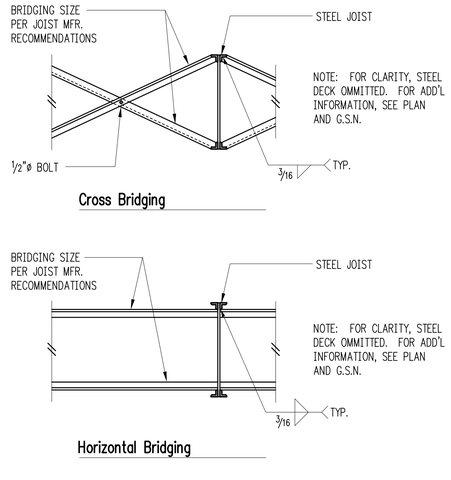


NOTE:
PROVIDE THIS DETAIL WHEN CONCENTRATED LOAD EXCEEDS 200 lbs − NOTIFY ENGINEER WHEN LOAD EXCEEDS 400 lbs. DETAIL APPLIES AT CONDITIONS INCLUDING, BUT NOT LIMITED TO, DUCTWORK HANGERS, PARTITION HANGERS, PIPING SUPPORTS, AND ROOFTOP MECHANICAL UNITS.

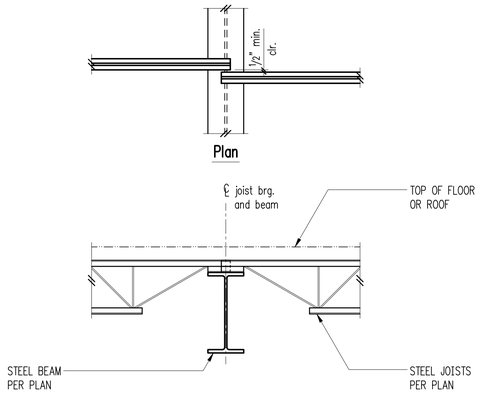
Additional Web Members for Concentrated Loads 6



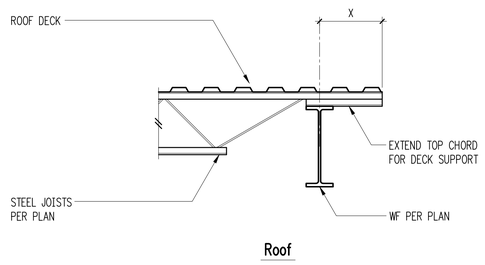
Bridging at Precast Wall 7



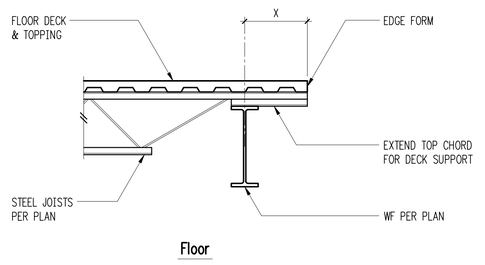
Bridging at Steel Joists 8

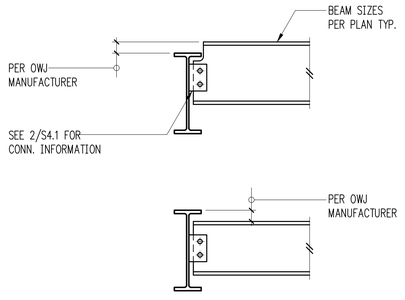


Interior OWSJ Bearing 9



Exterior OWSJ Bearing 11





Offset Framing for OWSJ Bearing 12

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DRAWN: SJB
DESIGN: SWJ
CHECKED: RGC
APPROVED: RGC

REVISIONS:

DPD:

PROJECT TITLE:

Swift Center
Sedro Wooley, WA

ARCHITECT:
RMC Architects
1223 Railroad Ave
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PH 360.676.7733

ISSUE: Schematic Design

SHEET TITLE: Typical Roof Framing Details

SCALE: 3/4 = 1'-0" U.N.O.
DATE: Sept. 2016
PROJECT NO: 10902-2016-03
SHEET NO: S4.4

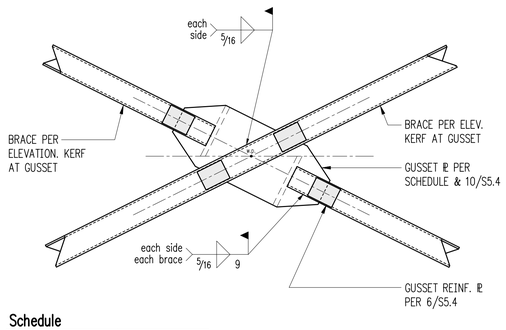
NO: OF SHEETS:

1

2

3

4



Schedule

FRAME	GUSSET	BRACE GUSSET WELD
"X"	1/2" GR50	5/16 – 9

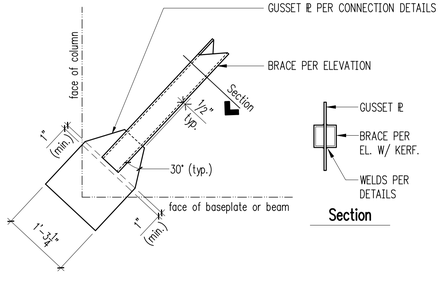
Cross Brace 5

Brace Reinforcing Plates 6

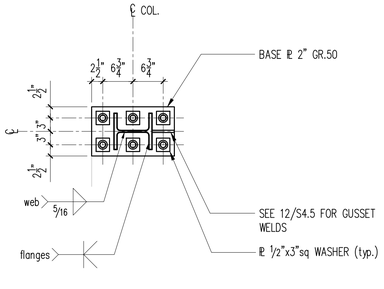
7

8

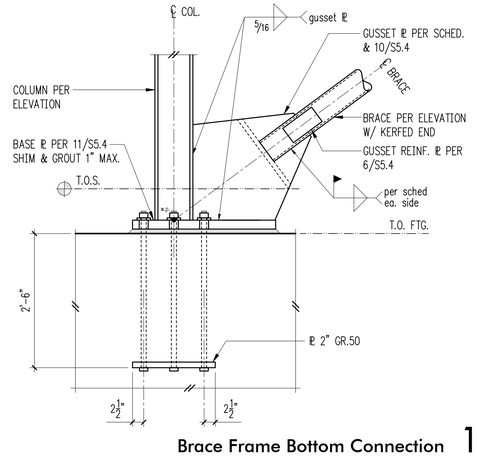
9



Typical Gusset Layout 10



Brace /Column Base Plates 11



Brace Frame Bottom Connection 12

SSF STRUCTURAL ENGINEERING

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DRAWN: SJB
DESIGN: SWJ
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APPROVED: RGC

REVISIONS:

DPD:

PROJECT TITLE:

Swift Center
Sedro Wooley, WA

ARCHITECT:
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PH 360.676.7733

ISSUE:
Schematic Design

SHEET TITLE:
Steel Details

SCALE: 3/4" = 1'-0" U.N.O.
DATE: Sept. 2016
PROJECT NO: 10902-2016-03
SHEET NO:

S4.5

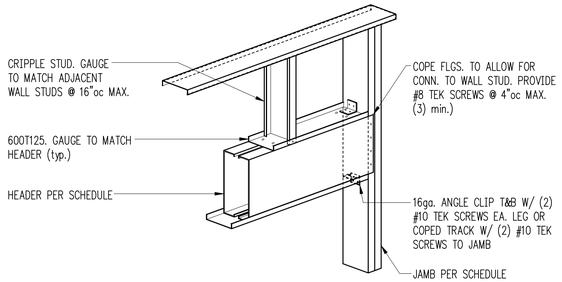
NO: OF SHEETS:

OPENING FRAMING SCHEDULE

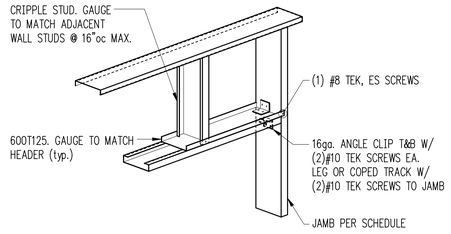
WALL HEIGHT	MEMBER	OPENING WIDTH				
		4'–0" MAX.	6'–0" MAX.	8'–0" MAX.	10'–0" MAX.	12'–0" MAX.
16'–0" MAX.	HEADER	600S162–54	600S162–54	600S200–68	(2) 600S137–43	(2) 600S137–43
	SILL	600T125–43	600T125–43	600S162–43	600S162–43	600S162–54
	JAMB	(2) 600S162–54	(2) 600S162–54	(2) 600S200–54	(2) 600S162–54	(3) 600S162–54

NOTES:

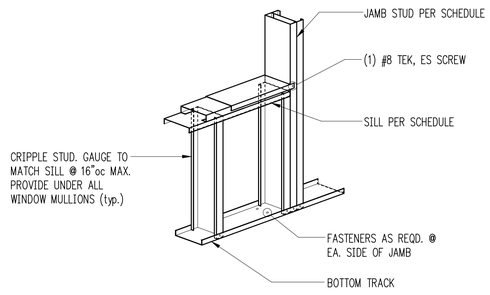
1. SCHEDULE KEY:
   - : TYPE 1
   - : TYPE 2



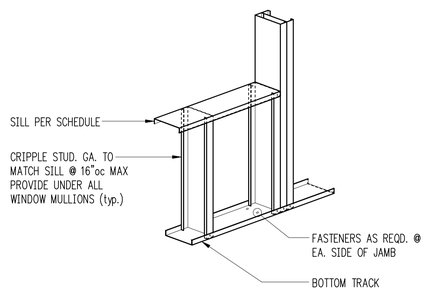
HEADER TYPE 2



HEADER TYPE 1



SILL TYPE 1



SILL TYPE 1

Typical Exterior Wall Opening 6

NOTES:

1. HEIGHTS ARE BASED ON ICBO ES EVALUATION REPORT NO. 4943–P, (STEEL STUD MANUFACTURERS ASSOCIATION, SSMA).
2. MAXIMUM STUD SPACING IS 16"oc.
3. EXTERIOR STUDS TO BE S162 MINIMUM (1⅝" flanges). INTERIOR STUDS TO BE S125 MINIMUM (1¼" flanges).
4. EXTERIOR STUD HEIGHTS BASED ON UNIFORM LATERAL LOAD OD 15 PSF AND A MAXIMUM DEFLECTION OF L/240.
5. INTERIOR STUD HEIGHTS BASED ON UNIFORM LATERAL LOAD OF 5 PSF AND A MAXIMUM DEFLECTION OF L/120.
6. ALLOWABLE HEIGHTS ARE BASED ON CONTINUOUS LATERAL SUPPORT OVER THE ENTIRE LENGTH OF BOTH STUD FLANGES. FLANGE SUPPORT IS PROVIDED BY GWB OR BRIDGING @ 48"oc MAXIMUM. GWB SHALL BE CONNECTED TO STUD FLANGES PER 1997 UBC TABLE 25G OR 25H.
7. DESIGNATION: 600 S 162 – 54
   - DEPTH
   - STYLE
   - FLANGE WIDTH
   - MATERIAL THICKNESS (MLS)
8. METAL FRAMING SHALL BE GALVANIZED UNLESS OTHERWISE NOTED. ALL HEIGHTS BASED ON 33 KSI YIELD STRENGTH STEEL.
9. WELDING OF COLD–FORMED METAL FRAMING SHALL CONFORM TO AWS D1.3 AND SHALL BE PERFORMED BY WELDERS QUALIFIED TO PRODUCE THE SPECIFIC CLASSES OF WELDS.

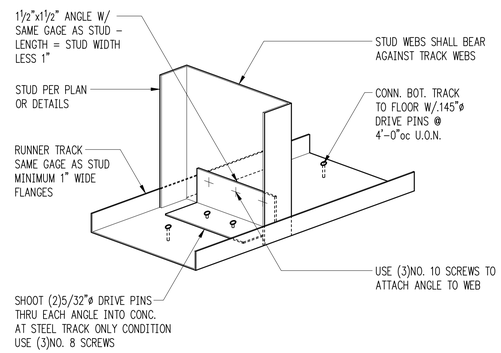
NON-LOAD BEARING EXTERIOR WALLS

MIL (GA.)	ALLOWABLE NON–LOAD BEARING PARTITION HEIGHT					
	350	362	400	550	600	800
33 (20)	11'–10"	12'–2"	13'–1"	16'–10"	18'–0"	22'–8"
43 (18)	12'–10"	13'–3"	14'–3"	18'–4"	19'–7"	24'–9"
54 (16)	13'–9"	14'–2"	15'–3"	19'–8"	21'–1"	26'–7"
68 (14)	14'–9"	15'–2"	16'–4"	21'–1"	22'–7"	28'–6"
97 (12)	––	––	––	––	25'–0"	31'–8"

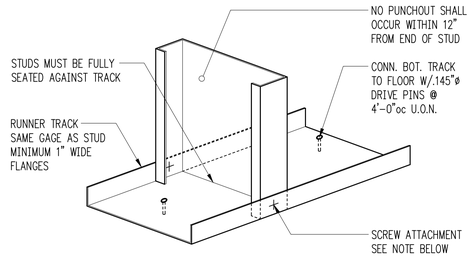
NON-LOAD BEARING INTERIOR WALLS

MIL (GA.)	ALLOWABLE NON–LOAD BEARING PARTITION HEIGHT				
	350	362	400	550	600
18 (25)	12'–0"	15'–1"	16'–2"	––	––
33 (20)	15'–1"	19'–6"	21'–8"	30'–1"	––
43 (20)	16'–5"	21'–3"	23'–8"	32'–10"	41'–8"
54 (16)	––	22'–9"	25'–4"	35'–2"	44'–9"
68 (14)	––	24'–4"	27'–1"	37'–8"	48'–0"

Non-Load Bearing Metal Framing Notes & Properties 10



Typical Top & Bottom Track at Exterior Walls 3



NOTES:

- WHEN TRACK IS ATTACHED DIRECTLY TO STUD FLANGE, A STANDARD NO. 6 x 7/16" PAN HEAD SHEET METAL SCREW SHALL BE USED. WHEN DRYWALL COVERING, TRACK AND STUD FLANGES ARE ATTACHED AT SAME TIME, A STANDARD (MIN.) 1" LONG DRYWALL SCREW SHALL BE USED. ANY COMBINATION OF THE ABOVE MATHODS MAY BE USED IN THE ERECTION OF A COMPLETED WALL ASSEMBLY.

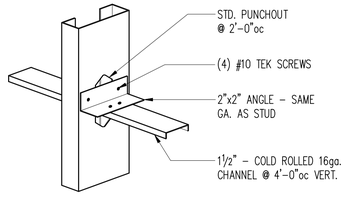
Typical Top & Bottom Track at Interior Walls 4

NOTES:

1. MEMBER SIZES CALLED OUT ARE BASED ON FINAL CONDITION WHERE RIDGID SHEATHING ARE ATTACHED TO BOTH FACES OF EACH STUD FOR LATERAL SUPPORT OF STUD FLANGES. DURING CONSTRUCTION, AND FOR SPECIFIC APPLICATIONS (FURRED WALLS, UNSHEATHED WALLS, ETC). LOADS MAY BE APPLIED WITHOUT THE INSTALLATION OF SHEATHING PROVIDED THAT STUDS ARE BRACED OR BRIDGED PER TYPICAL DETAILS.
2. CONTRACTOR SHALL PROVIDE TEMPORARY BRACING DURING CONSTRUCTION AS REQUIRED.

FURRING CHANNEL BRACING

FLAT STRAP LATERAL BRACING



SCREW ATTACHED BRIDGING CHANNEL WITH ANGLE

Typical Stud Wall Bridging / Blocking Detail 12

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DESIGN: SWJ
CHECKED: RGC
APPROVED: RGC

REVISIONS:

DPD:

PROJECT TITLE:

Swift Center
Sedro Wooley, WA

ARCHITECT:
RMC Architects
1223 Railroad Ave
Bellingham, WA 98225
PH 360.676.7733

ISSUE: Schematic Design

SHEET TITLE: Light Gauge Steel Details

SCALE: 3/4" = 1'-0" U.N.O.
DATE: Sept. 2016
PROJECT NO: 10902-2016-03
SHEET NO: S5.1

NO: OF SHEETS:

1

2

3

4

5

6

7

8

#10 SCREWS @ 12"oc
TYPICAL

Screw Option

WHERE STUDS OR JOISTS
ARE SHOWN TO ABUT
WELD AS SHOWN

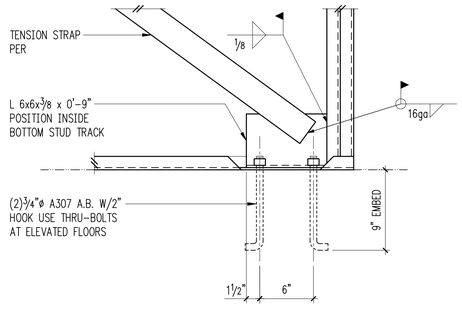
t 2-12

Weld Option

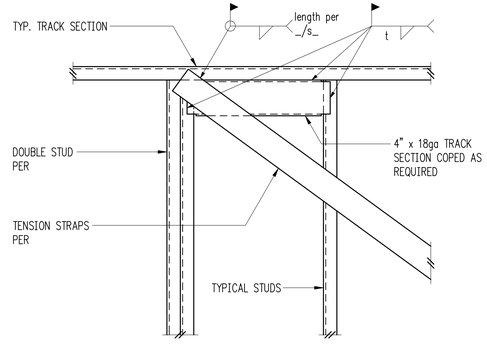
t = GAGE OF MATERIAL
CONNECTED

t 2-12

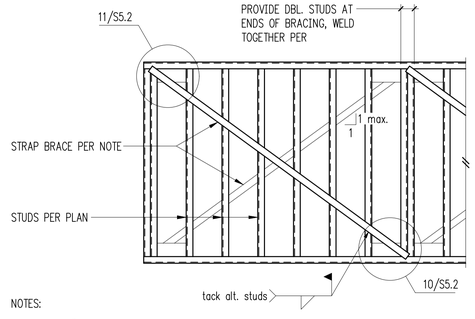
Typical Built-up Stud Column (Screw & Weld Options) 9



Strap Brace Base Connection 10



Strap Brace Top Connection 11



NOTES:

- PROVIDE 2" x 14ga STRAP EA. SIDE AS SHOWN FOR SLOPE ≤ 1 : 1 USE 3" x 14ga STRAP WHERE SLOPE IS GREATER THAN 1 : 1 MAXIMUM SLOPE SHALL BE 2 VERT. : 1 HORIZ.

Strap Bracing 12

STRUCTURAL ENGINEERING

2124 Third Avenue - Suite 100 - Seattle, WA 98121
p: 206.443.6212 ssfengineers.com

DRAWN: SJB
DESIGN: SWJ
CHECKED: RGC
APPROVED: RGC

REVISIONS:

DPD:

PROJECT TITLE:

Swift Center
Sedro Wooley, WA

ARCHITECT:
RMC Architects
1223 Railroad Ave
Bellingham, WA 98225
PH 360.676.7733

ISSUE:
Schematic Design

SHEET TITLE:
Light Gauge Steel Details

SCALE: 3/4" = 1'-0" U.N.O.
DATE: Sept. 2016
PROJECT NO: 10902-2016-03
SHEET NO:

S5.2

NO: OF SHEETS:

1

2

3

4

5

6

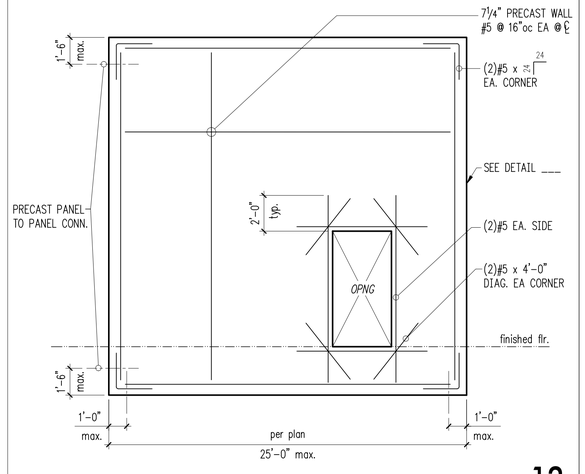
7

8

9

10

11



Typical Precast Wall Elevation 12

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ISSUE:
Schematic Design

SHEET TITLE:
Precast wall Elevation

SCALE: 1/4" = 1'-0" U.N.O.
DATE: Sept. 2016
PROJECT NO: 10902-2016-03
SHEET NO:

S6.1

NO: OF SHEETS:

SWIFT CENTER

PREPARED FOR:

PORT OF SKAGIT

LOCATED IN SEC. 7 & 8, T. 35 N., R. 5 E., W.M., SKAGIT COUNTY, SEDRO-WOOLLEY, WASHINGTON

PROJECT CONTACTS

CLIENT	CIVIL ENGINEER
PORT OF SKAGIT 15400 AIRPORT DRIVE BURLINGTON, WA 98233 P: 360-757-0011 HEATHER ROGERSON heather@portofskagit.com	MAUL, FOSTER & ALONGI, INC. 1329 NORTH STATE STREET SUITE 301 BELLINGHAM, WA 98225 P: 360-594-6262 KRISTI BOON, PE kboon@maulfoster.com
	AGENCY CITY OF SEDRO-WOOLLEY 325 METCALF STREET SEDRO-WOOLLEY, WA 98284 P: 360-855-0771 MARK FREIBERGER, PE mfreiberger@ci.sedro-woolley.wa.us

PROJECT SUMMARY

SITE ADDRESS:
24909 HUB DRIVE
SEDRO-WOOLLEY, WA 98284

NEW IMPROVEMENTS:
DEVELOP MANUFACTURING BUILDINGS AND ASSOCIATED FACILITIES. DEVELOPMENT WILL INCLUDE NEW STRUCTURES, PAVED PARKING AREAS, PAVED ROADWAYS, STORMWATER TREATMENT AND CONVEYANCE, DOMESTIC WATER, AND SANITARY SEWER UTILITIES AND APPURTENANCES.

VICINITY MAP

NOT TO SCALE

SHEET INDEX

GENERAL NOTES

1. CONTRACTOR TO VERIFY ALL UTILITY LOCATIONS AND DEPTHS PRIOR TO CONSTRUCTION. A MINIMUM OF TWO FULL BUSINESS DAYS PRIOR TO BEGINNING CONSTRUCTION, THE CONTRACTOR SHALL CALL 811 (UTILITY NOTIFICATION CENTER) FOR LOCATION MARK-UP OF EXISTING UTILITIES.
2. ALL CONSTRUCTION, MATERIALS, AND WORKMANSHIP SHALL CONFORM TO THE LATEST STANDARDS AND PRACTICES OF THE CITY OF SEDRO-WOOLLEY AND THE LATEST EDITION OF THE "STANDARD SPECIFICATIONS FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION" PREPARED BY WSDOT/APWA.
3. IN CASE OF A CONFLICT BETWEEN THE REGULATORY STANDARDS OR SPECIFICATIONS, THE MORE STRINGENT REQUIREMENT WILL PREVAIL.
4. ANY CHANGES TO THE DESIGN AND/OR CONSTRUCTION SHALL BE APPROVED BY THE OWNER OR ENGINEER.
5. APPROVAL OF THESE PLANS DOES NOT CONSTITUTE AN APPROVAL OF ANY OTHER CONSTRUCTION NOT SPECIFICALLY SHOWN ON THE PLANS. PLANS FOR STRUCTURES SUCH AS BRIDGES, BUILDINGS, TANKS, VAULTS, ROCKERIES, AND RETAINING WALLS MAY REQUIRE A SEPARATE REVIEW AND APPROVAL BY THE BUILDING DEPARTMENT PRIOR TO CONSTRUCTION.
6. A COPY OF THESE APPROVED PLANS SHALL BE ON THE JOB SITE WHENEVER CONSTRUCTION IS IN PROGRESS.
7. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN ALL CONSTRUCTION EASEMENTS AND PERMITS NECESSARY TO PERFORM THE WORK.
8. THE CONTRACTOR IS RESPONSIBLE FOR ALL CONSTRUCTION STAKING.
9. PUBLIC AND PRIVATE DRAINAGE WAYS SHALL BE PROTECTED FROM POLLUTION. NO MATERIAL IS TO BE DISCHARGED TO OR DEPOSITED IN STORMWATER SYSTEMS THAT MAY RESULT IN VIOLATION OF STATE OR FEDERAL WATER QUALITY STANDARDS.
10. ALL CONSTRUCTION WITHIN THE PUBLIC RIGHT-OF-WAY SHALL HAVE AN APPROVED PUBLIC RIGHT-OF-WAY WORK PERMIT PRIOR TO ANY CONSTRUCTION ACTIVITY WITHIN THE RIGHT-OF-WAY.
11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ADEQUATE SAFEGUARDS, SAFETY DEVICES, PROTECTIVE EQUIPMENT, FLAGGERS, AND ANY OTHER NEEDED ACTIONS TO PROTECT THE LIFE, HEALTH, AND SAFETY OF THE PUBLIC, AND TO PROTECT PROPERTY IN CONNECTION WITH THE PERFORMANCE OF WORK COVERED BY THE CONTRACTOR. ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE LATEST ADOPTED EDITION OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD) PUBLISHED BY THE U.S. DEPARTMENT OF TRANSPORTATION. TWO-WAY TRAFFIC MUST BE MAINTAINED AT ALL TIMES ON THE ADJACENT PUBLIC STREETS.
12. ANY PUBLIC OR PRIVATE CURB, GUTTER, SIDEWALK, OR ASPHALT DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED TO CITY OF SEDRO-WOLLEY STANDARDS AND PRACTICES.
13. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE INTEGRITY OF ADJACENT UTILITIES WHICH MAY INCLUDE, BUT ARE NOT LIMITED TO, WATER, SANITARY SEWER, STORMWATER, POWER, TELEPHONE, CABLE TV, GAS, IRRIGATION, AND STREET LIGHTING. THE CONTRACTOR SHALL NOTIFY RESIDENTS AND BUSINESSES 48 HOURS IN ADVANCE OF ANY WORK AFFECTING ACCESS OR SERVICE AND SHALL MINIMIZE INTERRUPTIONS TO DRIVEWAYS FOR RESIDENTS AND BUSINESSES ADJACENT TO THE PROJECT.
14. ALL LAWN AND VEGETATED AREAS DISTURBED WILL BE RESTORED TO ORIGINAL CONDITION. ANY DISTURBANCE OR DAMAGE TO OTHER PROPERTY ON ADJACENT PARCELS OR IN THE PUBLIC RIGHT-OF-WAY SHALL ALSO BE REPAIRED OR RESTORED TO ORIGINAL CONDITION.

PRELIMINARY

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Port of Skagit

Sedro-Woolley Innovation For Tomorrow

SWIFT CENTER

Job No: 0715.08 Date: 05 OCT 2016
File No: SWIFT CENTER
Drawn By: KMB
Checked By: SJF
Issued for: 30% DRAWINGS

COVER

C000

CONSTRUCTION NOTES

EROSION AND SEDIMENT CONTROL

1. ALL GRADING AND EROSION CONTROL MATERIALS, WORKMANSHIP AND METHODS OF CONSTRUCTION SHALL CONFORM TO THE CURRENT EDITION OF THE "EROSION AND SEDIMENT CONTROL MANUAL" PREPARED BY THE WASHINGTON DEPARTMENT OF ECOLOGY. EROSION CONTROL SHALL BE PER THE SPECIFICATIONS AND DETAILS CONTAINED THEREIN AND SHALL TAKE PRECEDENCE OVER OTHER STANDARDS AND SPECIFICATIONS.
2. THE CONTRACTOR SHALL MAINTAIN AN ON-SITE WRITTEN DAILY LOG OF EROSION CONTROL AND MAINTENANCE.
3. DURING THE PERIOD FROM OCTOBER 1ST TO APRIL 30TH, NO SOIL SHALL BE EXPOSED FOR MORE THAN TWO (2) DAYS. FROM MAY 1ST TO SEPTEMBER 30TH, NO SOILS SHALL REMAIN EXPOSED FOR MORE THAN SEVEN (7) DAYS.
4. THE CONSTRUCTION ENTRANCE MAY BE REDUCED TO LESS THAN 100' WITH APPROVAL OF THE EROSION CONTROL INSPECTOR.
5. INLET PROTECTION FABRIC SHALL BE INSTALLED UNDER GRATES FOR INLETS IN LANDSCAPED AREAS.
6. THE CONTRACTOR WILL PROVIDE APPROPRIATE PROACTIVE EROSION CONTROL DURING CONSTRUCTION TO PREVENT THE EROSION CONTROL SYSTEMS FROM FAILING DUE TO SILT. THE CONTRACTOR SHALL ENSURE THAT SEDIMENT DOES NOT IMPACT THE ADJACENT PROPERTIES OR THE SURROUNDING PUBLIC ROADS DURING CONSTRUCTION.
7. THE IMPLEMENTATION OF THESE EROSION AND SEDIMENT CONTROL (ESC) PLANS AND THE CONSTRUCTION, MAINTENANCE, REPLACEMENT, AND UPGRADING OF THESE ESC FACILITIES IS THE RESPONSIBILITY OF THE CONTRACTOR UNTIL ALL CONSTRUCTION IS COMPLETED AND APPROVED, AND VEGETATION IS ESTABLISHED.
8. CARE SHOULD BE TAKEN TO NOT DISTURB MORE AREA THAN NEEDED FOR CONSTRUCTION REQUIREMENTS. ALL DISTURBED SOILS SURFACES ARE TO BE STABILIZED. STABILIZATION OF DISTURBED SOIL AREAS SHALL CONSIST OF: HYDROSEEDING OR HANDSEEDING, MULCHING, PLACING OF EROSION CONTROL BLANKETS OR PLASTIC IN LANDSCAPING SOIL AREAS. IT WILL ALSO CONSIST OF PAVING AND CONCRETE WORK IN DRIVING, PARKING, AND SIDEWALK AREAS. ALL SEEDED AREAS ARE TO BE FERTILIZED, WATERED, AND MAINTAINED TO ENHANCE THE IMMEDIATE REGROWTH OF VEGETATION.
9. MATERIAL STOCKPILES ARE TO BE PROTECTED FROM PRECIPITATION BY THE FOLLOWING MEANS:

   • TEMPORARY - COVER PILES WITH TARPS OR PLASTIC SHEETING WEIGHTED WITH TIRES, LUMBER, OR CONCRETE BLOCKS.

   • PERMANENT - COVER PILES WITH TARPS OR PLASTIC, OR RESEED. PERIMETER AREAS AROUND PILES ARE TO BE SURROUNDED WITH EROSION CONTROL FILTER FABRIC FENCES UNTIL SOILS SURFACE IS STABILIZED WITH RESEEDING.
10. THE ESC FACILITIES SHALL BE INSPECTED DAILY BY THE CONTRACTOR AND MAINTAINED AS NECESSARY TO ENSURE CONTINUOUS FUNCTIONING. INSPECTION AND MAINTENANCE SHALL INCLUDE, BUT NOT BE LIMITED TO:

    • VERIFYING THAT ALL AREAS ARE GRADED SUCH THAT ALL RUNOFF IS DIRECTED TO A SEDIMENTATION TRAP FACILITY BEFORE BEING DISCHARGING TO SURFACE.

    • REMOVAL OF TRAPPED SILTS AT SILT BARRIERS, SILT TRAPS, OR POINTS OF ACCUMULATION.

    • ADDITIONAL PROTECTIVE MEASURES, AS REQUIRED, DUE TO JOB SITE CONDITIONS.

    • STABILIZED CONSTRUCTION ENTRANCES INSTALLED AT THE BEGINNING OF CONSTRUCTION AND MAINTAINED FOR THE DURATION OF THE PROJECT. MONITORING OF VEHICLES LEAVING THE SITE TO MINIMIZE TRANSMISSION OF LOOSE SOILS TO THE PUBLIC ROADWAYS.

    • IF SEDIMENT IS TRANSPORTED ONTO A ROAD SURFACE, THE SURFACE IS TO BE CLEANED THOROUGHLY AT THE END OF EACH DAY.
11. THE ESC FACILITIES ON INACTIVE SITES SHALL BE INSPECTED AND MAINTAINED A MINIMUM OF ONCE A MONTH OR WITHIN THE 24 HOURS FOLLOWING A STORM EVENT.
12. AT NO TIME SHALL MORE THAN ONE FOOT OF SEDIMENT BE ALLOWED TO ACCUMULATE WITHIN A TRAPPED CATCH BASIN. ALL CATCH BASINS AND CONVEYANCE LINES SHALL BE CLEANED PRIOR TO PAVING. THE CLEANING OPERATION SHALL NOT FLUSH SEDIMENT LADEN WATER INTO THE DOWNSTREAM SYSTEM.
13. THIS SEDIMENTATION AND EROSION CONTROL PLAN IS INTENDED TO BE UTILIZED AS A GUIDE TO CONTROL THE TRANSPORTATION OF LOOSE SOILS FROM THE PROPERTY THAT CAUSE WATER QUALITY AND NUISANCE PROBLEMS OUTSIDE OF THE CONSTRUCTION AREA.
14. DEPENDING ON THE CONTRACTOR'S CONSTRUCTION PRACTICES, SOME PORTIONS OF THE PROPOSED EROSION CONTROL PLAN MAY BE VARIED ACCORDING TO THE JOB SITE CONDITION. ALL CHANGES TO THE PLAN MUST BE REVIEWED AND APPROVED BY THE ENGINEER PRIOR TO ADJUSTMENT.

SITE GRADING

15. THE CONTRACTOR SHALL BECOME FAMILIAR WITH THE GEOTECHNICAL REPORT PREPARED FOR THE SITE BY MATERIALS TESTING & CONSULTING, INC. THE CONTRACTOR SHALL FOLLOW ALL RECOMMENDATIONS REGARDING EARTHWORK AS DETAILED IN THE REPORT.
16. ALL PORTIONS OF THE SITE WITHIN THE LIMITS OF THE WORK SHALL BE MOWED AND STRIPPED TO REMOVE ALL GRASS, ROOTS, ORGANIC SOIL, AND CONSTRUCTION FILL DEBRIS PRIOR TO THE BEGINNING OF ANY GRADING OPERATIONS. THE CONTRACTOR SHALL SALVAGE AND STOCKPILE ENOUGH SELECT TOPSOIL TO ACCOMMODATE LANDSCAPING NEEDS.
17. FOLLOWING STRIPPING AND GRUBBING, THE EXPOSED SOILS SHALL BE PROOF ROLLED TO REVEAL WEAK, ORGANIC, OR OTHER UNSUITABLE SOILS. UNSUITABLE SOILS SHALL BE EXCAVATED TO FIRM GROUND AND FILLED TO GRADE WITH SUITABLE NATIVE OR IMPORTED STRUCTURAL FILL.
18. EXPOSED SUBGRADE SOILS ON AREAS TO RECEIVE STRUCTURAL FILL SHALL BE SCARIFIED TO A DEPTH OF 8 INCHES.
19. IF FILLS ARE NEEDED FOR STRUCTURAL SUPPORT, THEY SHALL BE INSTALLED IN NO MORE THAN 8-INCH LIFTS, AND SHALL BE COMPACTED TO AT LEAST 95% OF THE MAXIMUM DRY DENSITY FOR FINE GRAINED NATIVE SOILS UNLESS OTHERWISE SPECIFIED ON THE PLAN. THE TOP LIFT OF FILL SHALL BE COMPACTED TO 92%. ALL OTHER SOILS SHALL BE COMPACTED TO NO LESS THAN 85%.
20. COMPACTION TESTING SHALL BE DONE IN ACCORDANCE WITH ASTM D 698 (STANDARD PROCTOR).
21. AT THE END OF THE GRADING OPERATION, THE STOCKPILED STRIPPINGS SHALL BE DISTRIBUTED ON THE LANDSCAPED AREAS IN A COMPACTED DEPTH NOT TO EXCEED 12".
22. ALL SURFACES SHALL BE GRADED SMOOTH AND FREE OF IRREGULARITIES THAT MIGHT ACCUMULATE SURFACE WATER.
23. ALL GRADING OPERATIONS AND DISTURBED SURFACE STABILIZATION SHALL BE IN ACCORDANCE WITH THE PROJECT EROSION CONTROL PLAN.

TRANSPORTATION

24. THE MOST CURRENT EDITIONS OF THE WASHINGTON DEPARTMENT OF TRANSPORTATION STANDARD DRAWINGS AND STANDARD DETAILS AND THE MOST CURRENT EDITIONS OF THE CITY OF SEDRO-WOOLLEY DESIGN STANDARDS SHALL BE UTILIZED IN THE CONSTRUCTION OF TRANSPORTATION ELEMENTS OF THESE PLANS.
25. STREET SIGNING AND STRIPING SHALL BE INSTALLED BY THE DEVELOPER. ALL STREET SIGNS AND STRIPING SHALL BE INSTALLED PER THE LATEST ADOPTED EDITION OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD) PUBLISHED BY THE U.S.DEPARTMENT OF TRANSPORTATION AND LATEST ADOPTED EDITION OF THE STATE OF WASHINGTON SUPPLEMENT TO THE MUTCD.
26. ALL CONSTRUCTION WITHIN THE RIGHT-OF-WAY SHALL HAVE AN APPROVED TRAFFIC CONTROL PLAN AND RIGHT-OF-WAY PERMIT PRIOR TO ANY ON-SITE CONSTRUCTION ACTIVITY.
27. PAVING WITHIN THE PUBLIC RIGHT-OF-WAY WILL NOT BE ALLOWED DURING WET OR COLD WEATHER, PER DOT SPECIFICATIONS.
28. ALL PAVEMENT SHALL BE STRAIGHT CUT PRIOR TO PAVING. EXISTING PAVEMENT SHALL BE REMOVED AS NECESSARY TO PROVIDE A SMOOTH TRANSITION FOR BOTH RIDE AND DRAINAGE.
29. ALL ADA PEDESTRIAN RAMPS SHOWN ON THE PLANS AND ON THE DETAIL SHEETS SHALL BE CONSTRUCTED WITH THE PROJECT.
30. CONTRACTOR SHALL REPORT ALL DAMAGES IMMEDIATELY TO THE CITY'S PUBLIC WORKS DEPARTMENT OR CONTACT THE INSPECTOR ON THE JOB.
31. PUBLIC RIGHTS-OF-WAY SHALL BE KEPT IN A CLEAN AND SERVICEABLE CONDITION AT ALL TIMES. IN THE EVENT MATERIALS ARE INADVERTENTLY DEPOSITED ON ROADWAYS, THE MATERIAL SHALL BE PROMPTLY REMOVED. MATERIALS ARE TO BE SWEPT AND REMOVED WITH A VACUUM SWEEPER.

STORM SEWER CONSTRUCTION

32. ALL MATERIALS AND INSTALLATION OF STORM SEWERS AND DRAINAGE SYSTEMS SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS IN THE LATEST ADDITION OF THE "WASHINGTON STANDARD SPECIFICATIONS FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION" BY THE AMERICAN PUBLIC WORKS ASSOCIATION AND THE WASHINGTON DEPARTMENT OF TRANSPORTATION. WHEREVER THE STANDARD SPECIFICATIONS REFER TO THE "STATE", "SECRETARY", OR WHEN REFERENCE IS MADE TO THE DEPARTMENT OF TRANSPORTATION IT SHALL BE UNDERSTOOD THAT THE STANDARD SPECIFICATIONS SHOULD READ THE "OWNER'. ADDITIONALLY, ALL MATERIALS AND INSTALLATION OF STORM SEWERS AND DRAINAGE SYSTEMS IN THE RIGHT OF WAY SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS IN THE MOST CURRENT EDITIONS OF THE CITY OF SEDRO-WOOLLEY DESIGN STANDARDS.
33. PIPE LENGTHS SHOWN ON THE PLANS ARE TO THE CENTER OF THE STRUCTURE.
34. PRE-PAVING AS-BUILTS ARE REQUIRED FOR STORMWATER, WATER, AND SANITARY FACILITIES. PROVIDE AS-BUILT INFORMATION TO THE CONSTRUCTION INSPECTOR AND CONSTRUCTION ENGINEER FOR APPROVAL PRIOR TO ANY PAVING.
35. MATERIALS FOR STORM SEWER INLET LATERALS AND MAINS SHALL BE DUAL-WALLED, SMOOTH INTERIOR, CORRUGATED POLYETHYLENE STORM SEWER PIPE, UNLESS OTHERWISE SPECIFIED ON PLANS.
36. SEE THE WASHINGTON STANDARD SPECIFICATIONS FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION SECTION 9-08 FOR STORM SEWER PIPE MATERIALS AND PLANS.
37. PERFORATED PIPE MATERIALS SHALL BE PERFORATED CORRUGATED POLYETHYLENE STORM SEWER PIPE.
38. CATCH BASINS SHALL BE TYPE 1 H-20 OR PROJECT APPROVED EQUAL, UNLESS OTHERWISE SPECIFIED ON PLANS.
39. TRENCH EXCAVATION SHALL MEET THE REQUIREMENTS OF WASHINGTON STANDARD SPECIFICATIONS FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION SECTION 7-08.
40. STORM SEWER PIPE BEDDING AND BACKFILL SHALL MEET THE REQUIREMENTS OF SECTIONS 7-08. PIPE BEDDING MATERIALS SHALL BE $\frac{3}{4}$" - 0 AGGREGATE BEDDING PER SECTION 9-03 AND PIPE BACKFILL MATERIALS SHALL BE CLASS A OR CLASS B PER SECTION 9-03 AS APPROVED BY THE INSPECTOR. BACKFILL MATERIAL SHALL BE COMPACTED TO 95% OF THE MAXIMUM RELATIVE DENSITY PER ASTM D 698 (STANDARD PROCTOR). NATIVE BACKFILL MAY BE USED UPON APPROVAL FROM THE INSPECTOR. STORM SEWER PIPE SHALL BE INSTALLED IN THE RIGHT OF WAY IN ACCORDANCE TO THE "UTILITY TRENCH" CITY OF SEDRO-WOOLLEY STANDARD DETAIL.
41. STORM SEWER INLETS, AS NOTED ON THE PLANS, SHALL BE FITTED WITH AN APPROVED TRAP.

SANITARY SEWER CONSTRUCTION

42. SANITARY SEWER LATERALS SHALL BE 6" IN SIZE, INSTALLED AT A MINIMUM SLOPE OF 0.02 FT/FT UNLESS OTHERWISE SPECIFIED ON THE PLAN.
43. MATERIALS FOR SANITARY SEWER PIPE SHALL BE PVC PIPE CONFORMING TO ASTM D3034 OR GREEN COLORED PVC-C900 DR 14, HDPE PIPE DR 21, OR DUCTILE IRON, AS NOTED ON THE PLANS.
44. PIPE LENGTHS SHOWN ON THE PLANS ARE TO THE CENTER OF THE STRUCTURE.
45. SANITARY SEWER PIPE BEDDING AND BACKFILL SHALL MEET THE REQUIREMENTS OF SECTIONS 7-08. PIPE BEDDING MATERIALS SHALL BE $\frac{3}{4}$" - 0 AGGREGATE BEDDING PER SECTION 9-03 AND PIPE BACKFILL MATERIALS SHALL BE CLASS A OR CLASS B PER SECTION 9-03 AS APPROVED BY THE INSPECTOR. BACKFILL MATERIAL SHALL BE COMPACTED TO 95% OF THE MAXIMUM RELATIVE DENSITY PER ASTM D 698 (STANDARD PROCTOR). NATIVE BACKFILL MAY BE USED UPON APPROVAL FROM THE INSPECTOR. SANITARY SEWER PIPE SHALL BE INSTALLED IN ACCORDANCE TO THE "TRENCH BACKFILL, BEDDING, PIPE ZONE, AND MULTIPLE INSTALLATIONS" STANDARD DETAIL. SANITARY SEWER PIPE SHALL BE INSTALLED IN THE RIGHT OF WAY IN ACCORDANCE TO THE "UTILITY TRENCH" CITY OF SEDRO-WOOLLEY STANDARD DETAIL.
46. CONTRACTOR TO MAINTAIN A MINIMUM 10' HORIZONTAL AND 18" VERTICAL SEPARATION BETWEEN ALL EXISTING AND PROPOSED WATER AND SANITARY SEWER MAINS.
47. ALL SANITARY MANHOLES SHALL BE 48" Ø UNLESS OTHERWISE SPECIFIED ON PLANS.
48. LOCATOR TAPE TO BE LOCATED EIGHTEEN (18) INCHES ABOVE A SEWER MAIN AND TWELVE (12) INCHES ABOVE A SERVICE LINE.
49. THE LOCATOR TAPE SHALL BE MARKED WITH CONTINUOUS THREE (3) INCH WIDE GREEN SIX (6) MIL THICK LOCATOR TAPE THREE (3) INCH HIGH BLACK LETTERS EVERY THREE (3) FEET WITH "WARNING - BURIED SANITARY SEWER".
50. A CONTINUOUS TONING WIRE SHALL BE ATTACHED TO THE TOP OF THE SANITARY SEWER SERVICE LINE. THE TONING WIRE SHALL BE COATED #14 AWG (MIN.) SOLID COPPER WIRE, OR APPROVED EQUAL. THE TONING WIRE SHALL END IN THE VALVE BOX WITH A MINIMUM OF ONE (1) FOOT COILED OF WIRE. THE TONING WIRE SHALL BE TESTED FOR CONTINUITY PRIOR TO ACCEPTANCE. ALL SPLICES WILL BE SOLDERED A MINIMUM OF TWO (2) INCHES IN LENGTH AND ENCASED WITH 3M SCOTCH #220 VINYL MASTIC PADS (3 ½" BY 4 ½") OR 3M SCOTCH 33 ELECTRICAL TAPE AND COATED WITH SCOTCHKOTE ELECTRICAL COATING #1485 (REPEAT PROCESS AFTER FIRST COATING DRIES), OR APPROVED EQUAL.

WATER SYSTEM CONSTRUCTION

51. MATERIALS FOR WATER PIPE SHALL BE DUCTILE IRON CL-52 OR PVC PIPE CONFORMING TO PVC-C900 DR 25, UNLESS OTHERWISE SPECIFIED ON PLANS.
52. PIPE BEDDING MATERIALS SHALL BE $\frac{3}{4}$" - 0 AGGREGATE BEDDING PER SECTION 9-03, COMPACTED TO 95% OF THE MAXIMUM RELATIVE DENSITY PER ASTM D 698 (STANDARD PROCTOR). BACKFILL FOR WATER TRENCHES SHALL BE CLASS A OR CLASS B PER SECTION 9-03 AS APPROVED BY THE DIRECTOR, UNLESS OTHERWISE SPECIFIED ON THE PLANS. NATIVE BACKFILL MAY BE USED UPON APPROVAL FROM THE INSPECTOR. BACKFILL MATERIAL SHALL BE COMPACTED TO 95% OF THE MAXIMUM RELATIVE DENSITY PER ASTM D 698 (STANDARD PROCTOR). WATER PIPE SHALL BE INSTALLED IN THE RIGHT OF WAY IN ACCORDANCE WITH THE CITY OF SEDRO-WOOLLEY STANDARD DETAIL.
53. CONTRACTOR TO MAINTAIN A MINIMUM 10' HORIZONTAL AND 18" VERTICAL SEPARATION BETWEEN ALL EXISTING AND PROPOSED WATER AND SANITARY SEWER MAINS.
54. ANY SIGNIFICANT DEVIATION FROM THE PLANS WILL REQUIRE A REQUEST FROM THE APPLICANT'S ENGINEER AND APPROVAL FROM THE CITY'S ENGINEER AND CITY INSPECTOR.

BACKFLOW PREVENTION DEVICE NOTES

55. ALL COMMERCIAL WATER METERS SHALL BE PROTECTED WITH A STATE-APPROVED BACKFLOW DEVICE.
56. STATE APPROVED BACKFLOW PROTECTION SHALL BE REQUIRED ON FIRE SPRINKLER AND IRRIGATION SYSTEMS. ALL HOSEBIBS SHALL BE PROTECTED WITH VACUUM BREAKERS. FURTHER BACKFLOW PREVENTION SHALL BE REQUIRED DEPENDING ON WATER USAGE IE - BOILERS, CHILLERS, CHEMICAL ADDITIONS, BOOSTER PUMPS, WELLS, ETC.

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CONSTRUCTION NOTES

C001

PRELIMINARY

ABBREVIATIONS

AC	ACRE, ASPHALT CONCRETE PAVEMENT	LB	POUND(-S)
ACOE	ARMY CORPS OF ENGINEERS	LF	LINEAR FEET
AD	AREA DRAIN	LONG.	LONGITUDINAL
AGG	AGGREGATE	LT	LEFT
AIR	AIR RELIEF	MAX	MAXIMUM
AMSL	ABOVE MEAN SEA LEVEL	MFA	MAUL FOSTER & ALONGI, INC.
AP	ANGLE POINT	MFR	MANUFACTURER
APN	APPARENT PARCEL NUMBER	MH	MANHOLE
APPD	APPROVED	MIC	MONUMENT (IN CASE)
APPROX, ±	APPROXIMAT(-E, -LY)	MIN	MINIMUM; MINUTE
ASPH	ASPHALT	MISC	MISCELLANEOUS
ASSY	ASSEMBLY	MJ	MECHANICAL JOINT
		MON	MONUMENT (SURFACE)
BCR	BEGIN CURB RETURN	MW	MONITORING WELL
BF	BUTTERFLY		
BGS	BELOW GROUND SURFACE	N	NORTH
BLDG	BUILDING	N/A	NOT APPLICABLE
BLVD	BOULEVARD	NAT G, NG	NATURAL GAS
BM	BENCHMARK	NE	NORTHEAST
BMP	BEST MANAGEMENT PRACTICE	NO.	NUMBER
BO	BLOW-OFF	NTS	NOT TO SCALE
BOC	BACK OF CURB	NW	NORTHWEST
BOT, BTM	BOTTOM		
B.O.W.	BOTTOM OF WALL	OC	ON CENTER
BVC	BEGING VERTICAL CURVE	OD	OUTSIDE DIAMETER
		OHP	OVERHEAD POWER
CB	CATCH BASIN	OT	OWNERSHIP TIE
CDF	CONTROLLED DENSITY FILL		
CEM	CEMENT	P	PIPE
CF	CUBIC FEET	P TRAN	PAD MOUNTED TRANSFORMER
CFS	CUBIC FEET PER SECOND	PC	POINT OF CURVATURE
CIP	CAST IRON PIPE	PCC	PORTLAND CEMENT CONCRETE
CIR	CIRCLE	PEN.	PENETRATION
CK	CHECK	PERF	PERFORAT(-E, -ED, -ES, -ION)
CL, ℄	CENTERLINE	P.L., PL	PROPERTY LINE, PLACE
CMP	CORRUGATED METAL PIPE	POW V	POWER VAULT
CO	CLEANOUT	PP	POWER POLE
COMP	COMPACTION	PROP.	PROPOSED
CONC	CONCRETE	PS	PUMP STATION
CPE	CORRUGATED POLYETHYLENE	PSF	POUNDS PER SQUARE FOOT
CPL	COUPLING	PSI	POUNDS PER SQUARE INCH
CT	COURT	PT	POINT OF TANGENT
CTR	CENTER	PV	PLUG VALVE
CULV	CULVERT	PVI	POINT OF VERTICAL INTERSECTION
CY	CUBIC YARD	PVC	POLYVINYL CHLORIDE
		PVMT	PAVEMENT
D	DEPTH		
DEG	DEGREE(-S)	R, RAD	RADIUS
DI	DUCTILE IRON	RC	REINFORCED CONCRETE
DIA	DIAMETER	RCP	REINFORCED CONCRETE PIPE
DIM.	DIMENSION(-S)	RD	ROOF DRAIN
DIP, D.I.P.	DUCTILE IRON PIPE	RED	REDUCER
DOT	DEPARTMENT OF TRANSPORTATION	REQD	REQUIRED
		REQT	REQUIREMENT
DR	DIMENSION RATIO	REV	REVISION
DTL	DETAIL	R/W, ROW	RIGHT OF WAY
DWG(S)	DRAWING(-S)	RT	RIGHT
E	EAST	S	SOUTH, SLOPE
EA	EACH	SB	SOIL BORING
ECR	END CURB RETURN	SCH	SCHEDULE
EG	EXISTING GROUND	SD	STORM DRAIN
EL, ELEV	ELEVATION	SDR	STANDARD DIMENSION RATIO
ELB, ELL	ELBOW	SE	SOUTHEAST
ELEC	ELECTRIC(-AL)	SF	SQUARE FEET
ENGR	ENGINEER	SHT	SHEET
ENTR	ENTRANCE	SL	SLOPE
EP, EOP	EDGE OF PAVEMENT	SPEC	SPECIFICATIONS
EQ	EQUAL(-LY)	SQ	SQUARE
ESC	EROSION CONTROL	SQ IN	SQUARE INCHES
ESMT	EASEMENT	SRF	SURFACE
EST	ESTIMATE(-D)	ST	STREET
EVC	END VERTICAL CURVE	STA	STATION
EXC	EXCAVATE	STD	STANDARD
EX., EXTG.	EXISTING	STL	STEEL
EW	EACH WAY	STRM	STORM
		STRUCT	STRUCTUR(-E, -AL)
FF	FINISH FLOOR	SSWR	SANITARY SEWER
FG	FINISH GRADE	SW,S/W	SIDEWALK, SOUTHWEST
FH	FIRE HYDRANT		
FL	FLOW LINE	TB	THRUST BLOCK
FLG	FLANGE	TBM	TEMPORARY BENCHMARK
FM	FORCE MAIN	TC	TOP OF CURB
FT	FEET, FOOT	TEL, TELE	TELEPHONE
		TEMP	TEMPORARY
GAL	GALLON(-S)	TP	TOP OF PAVEMENT, TEL POLE, TURNING POINT
GM	GAS METER		
GND	GROUND	TW	TOP OF WALL
GP	GUARD POST	TYP	TYPICAL
GPM	GALLONS PER MINUTE		
GRD	GRADE	UG	UNDERGROUND
GV	GAS VALVE, GATE VALVE	UGE	UNDERGROUND ELECTRIC
		UTIL	UTILITY
HDPE	HIGH DENSITY POLYETHYLENE		
HGT, HT	HEIGHT	VC	VERTICAL CURVE
HP	HORSEPOWER	VERT	VERTICAL
HORZ	HORIZONTAL	VOL	VOLUME
HYD	HYDRANT		
		W	WIDTH; WIDE; WEST
ID	INSIDE DIAMETER	W/	WITH
IE	INVERT ELEVATION	WATR	WATER
IN	INCH(-ES)	WM	WATER METER
INTX	INTERSECTION	W/O	WITHOUT
INV	INVERT	WSE	WATER SURFACE ELEVATION
IP	IRON PIPE	WV	GATE/GENERAL WATER VALVE
L	LENGTH	YD	YARD
LAT	LATERAL	YR	YEAR

GENERAL LEGEND

GAS/POWER/TELEPHONE SYMBOLS

SYMBOL EXIST.	SYMBOL PROP.	DESCRIPTION
		GAS METER
		GAS VALVE
		PAD MOUNTED TRANSFORMER
P		POWER VAULT
		TRANSMISSION TOWER
		UTILITY POLE
		UTILITY POLE ANCHOR
		TELEPHONE RISER
T		TELEPHONE VAULT
		LIGHT POLE

SURVEY SYMBOLS

SYMBOL THEOR./ EXIST.	SYMBOL FOUND/ PROP.	DESCRIPTION
		ANGLE POINT
		BENCH MARK
		BLOCK CORNER
		IRON PIPE
		MONUMENT
		OWNERSHIP TIE
		SECTION DATA:
		SECTION CENTER
		SECTION CORNER
		QUARTER CORNER
		SIXTEENTH CORNER
		CLOSING CORNER
MC / WC	MC / WC	MEANDER CORNER
		WITNESS CORNER
		SOIL BORING
×	⊗	SPOT ELEVATION

WATER SYMBOLS

SYMBOL EXIST.	SYMBOL PROP.	DESCRIPTION
		CAP/PLUG
		COUPLING
		GUARD POST / BOLLARD
		REDUCER
		THRUST BLOCK
		WATER METER
		DOUBLE CHECK VALVE ASSEMBLY
		FIRE HYDRANT
		AIR RELIEF
		BLOW-OFF VALVE
		CHECK VALVE
		GATE VALVE
		BENDS:
		90 DEGREE BEND
		45 DEGREE BEND
		22.5 DEGREE BEND
		11.25 DEGREE BEND
		VERTICAL BEND
		TEE
		CROSS

SANITARY/STORM SEWER SYMBOLS

SYMBOL EXIST.	SYMBOL PROP.	DESCRIPTION
		SAN. SEWER CLEAN OUT
	S	SAN. SEWER MANHOLE
		STORM DRAIN CATCH BASIN
		STORM DRAIN CULVERT
	D	STORM DRAIN MANHOLE
		DRY WELL
		AREA DRAIN

SECTION NUMBER / SECTION REFERENCE SHEET

TYPICAL SECTION CALLOUT

DETAIL NUMBER / DETAIL REFERENCE SHEET

TYPICAL DETAIL CALLOUT

CHANNELIZATION SYMBOLS

SYMBOL EXIST.	SYMBOL PROP.	DESCRIPTION
		BIKE PATH
		HANDICAP SYMBOL
STOP	STOP	STOP
		RAISED MARKERS:
		LANE MARKERS TYPE I
		LANE MARKERS TYPE II
		SIGN

MISCELLANEOUS SYMBOLS

SYMBOL EXIST.	SYMBOL PROP.	DESCRIPTION
		MONITORING WELL
		INLET PROTECTION PILLOW
		CONSTRUCTION ENTRANCE
	FG 83.88	PROPOSED SPOT SHOT

EXISTING GRADE MAJOR CONTOUR	27
EXISTING GRADE MINOR CONTOUR	27
EXISTING STORM DRAIN PIPE	SD_x
EXISTING WATER PIPE	W_x
EXISTING SANITARY SEWER PIPE	SS_x
EXISTING AC PAVEMENT	
EXISTING CONCRETE SURFACING	
EXISTING GRAVEL SURFACING	
EXISTING BUILDING	
EXISTING FENCE LINE	
EXISTING ROAD CENTERLINE	
EXISTING RIGHT-OF-WAY	
EXISTING PROPERTY LINE	PL

PROPOSED GRADE MAJOR CONTOUR (5.0' INTERVAL)	27
PROPOSED GRADE MINOR CONTOUR (1.0' INTERVAL)	27
PROPOSED STORM DRAIN PIPE	SD
PROPOSED WATER PIPE	W
PROPOSED SANITARY SEWER PIPE	SS
PROPOSED AC PAVEMENT	
PROPOSED CONCRETE SURFACING	
PROPOSED GRAVEL SURFACING	
PROPOSED BUILDING	
PROPOSED FENCE LINE	
PROPOSED ROAD CENTERLINE	
PROPOSED RIGHT-OF-WAY	
PROPOSED PROPERTY LINE	PL

PROPOSED SEDIMENT FENCE	SF
PROPOSED FLOW DIRECTION	OR OR
PROPOSED GRADE BREAK	
PROPOSED DITCH FLOW LINE	
PROPOSED COMPOST SOCK	
PROPOSED PAINT STRIPE	
PROPOSED TRUNCATED DOMES	
EXISTING FLOW DIRECTION	
EXISTING OVERHEAD POWER	P
EXISTING UNDERGROUND POWER	E_x
EXISTING UNDERGROUND TELEPHONE	T
EXISTING UNDERGROUND GAS	G

PRELIMINARY

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MASTER LEGEND

C002

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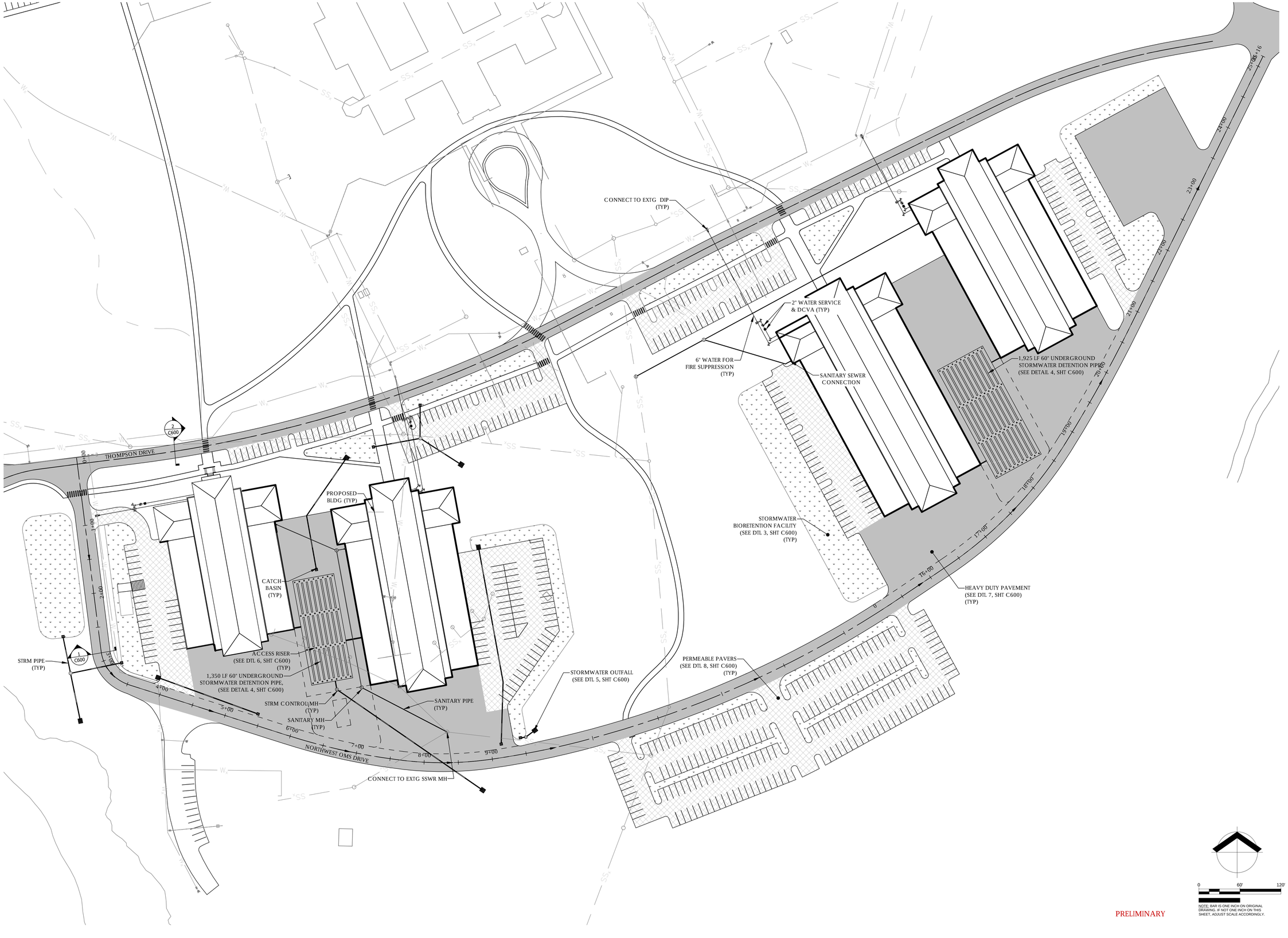
EXISTING CONDITIONS PLAN

C100

0 50' 100'

NOTE: BAR IS ONE INCH ON ORIGINAL DRAWING. IF NOT ONE INCH ON THIS SHEET, ADJUST SCALE ACCORDINGLY.

PRELIMINARY



PRELIMINARY

0 60' 120'

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OVERALL SOUTHERN INFLUENCE SITE PLAN

C200

GRADING QUANTITIES	
Cut	9781 CY
Fill	6731 CY
Net	3050 CY (CUT)

NOTES:

ALL SLOPES ON PAVEMENT >1%
IN AREAS OF RIPARIAN HABITAT, INSTALL GABION BASKETS

THOMPSON DRIVE
NORTHWEST OMS DRIVE
PROPOSED BLDG (TYP)
FF 101.00
PROPOSED CONTOUR (TYP)
EXTG CONTOUR (TYP)
455 LF SILT FENCE
670 LF SILT FENCE
375 LF SILT FENCE
MIN. 1%
SF

PRELIMINARY

0 40' 80'

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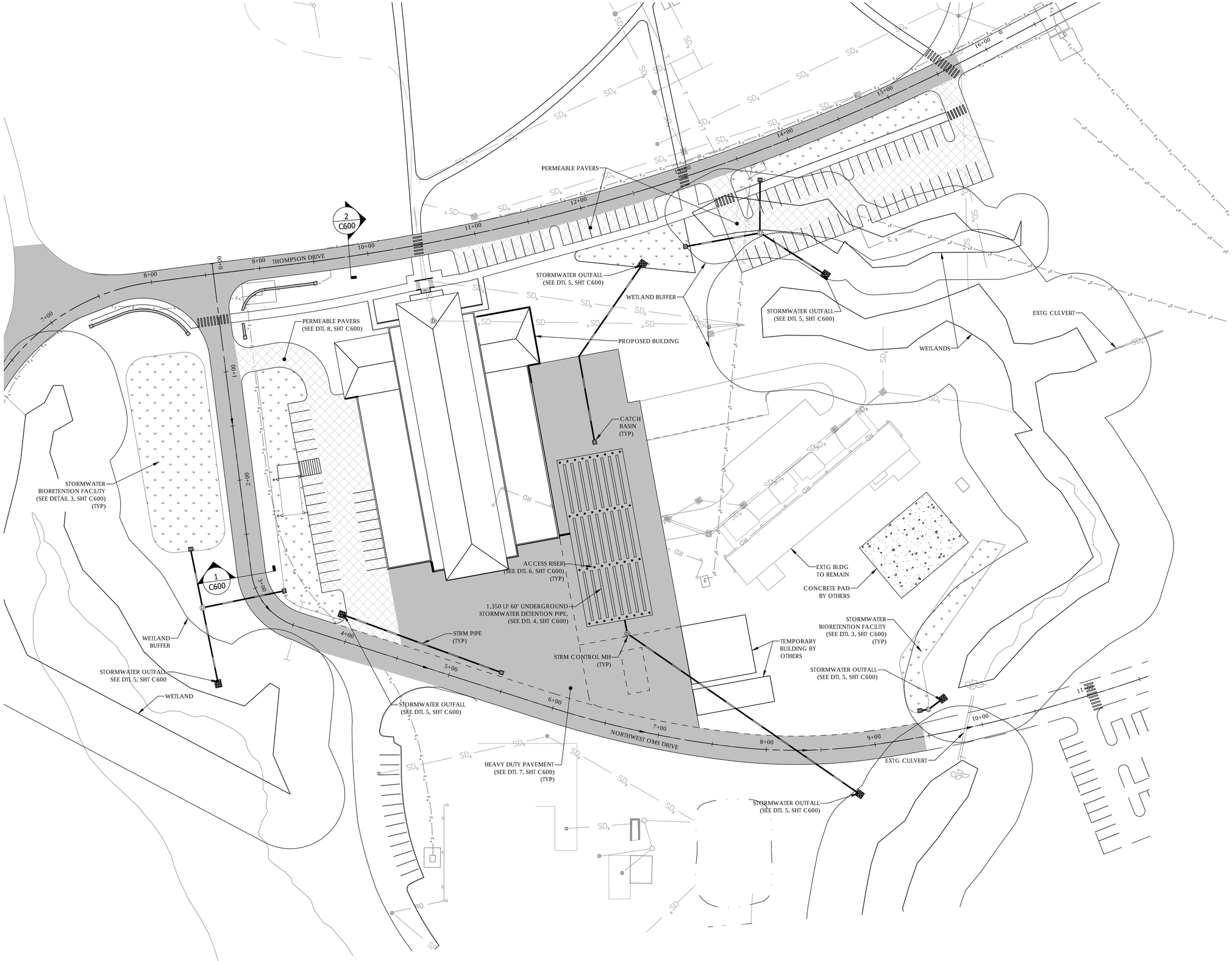
GRADING AND EROSION CONTROL PLAN

C300



PRELIMINARY

0 40' 80'

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STREET AND STORM DRAINAGE PLAN

C400

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EXTG 8" PVC (WATR)

EXTG 8" PVC (WATR)

EXTG 12" DIP (WATR)

EXTG 12" DIP (WATR)

THOMPSON DRIVE

NORTHWEST OMS DRIVE

2" WATER SERVICE & DCVA

CONNECT TO EXTG 12" DIP

6" WATER FOR FIRE SUPPRESSION

PROPOSED BUILDING (TYP)

SANITARY SEWER CONNECTION

95 LF 6" SAN

PROPOSED SANITARY MH (TYP)

PROPOSED SANITARY PIPE (TYP)

204 LF 8" SAN

141 LF 8" SAN

300 LF EXTG 8" PVC SSWR @ S=0.0100

CONNECT TO EXTG SSWR MH
EXTG RIM 100.5
EXTG IE 94.00 (IN)
EXTG IE 93.80 (OUT)

EXTG FIRE HYDRANT (TYP)

FUTURE IMPROVEMENTS (TYP)

114 LF EXTG 12" RCP (SSWR) @ S=0.0032

PUBLIC SSWR MAIN FLOWS TO CONNECTION IN FRUITDALE RD

PRELIMINARY

0 40' 80'

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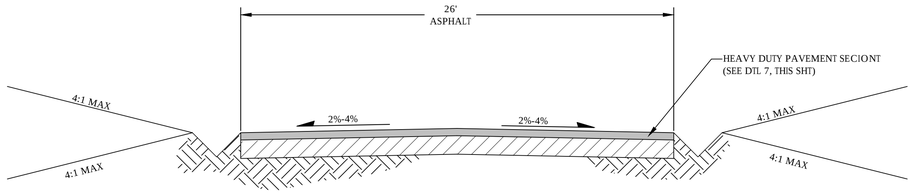
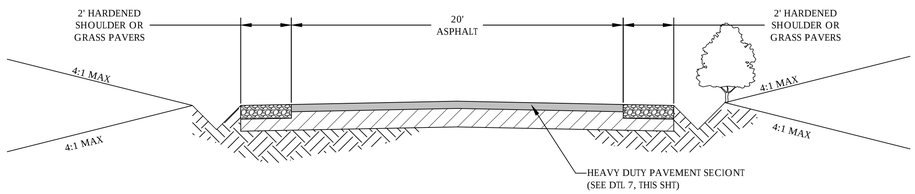
WATER AND SANITARY SEWER PLAN

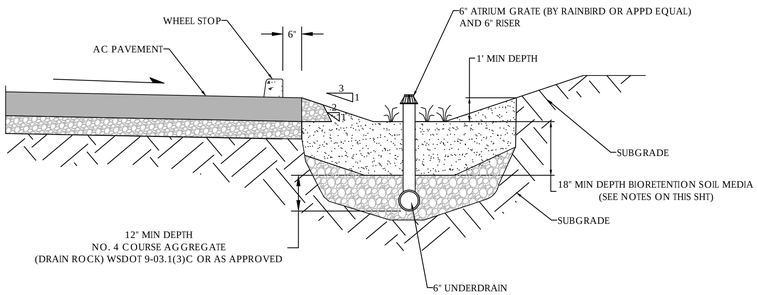
C500



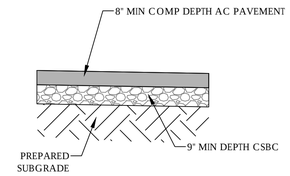
1 PROPOSED ROAD WITH STORM DITCH
NTS



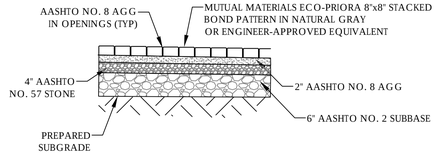
2 EXISTING ROAD WITH HARDENED SHOULDERS & STORM
NTS



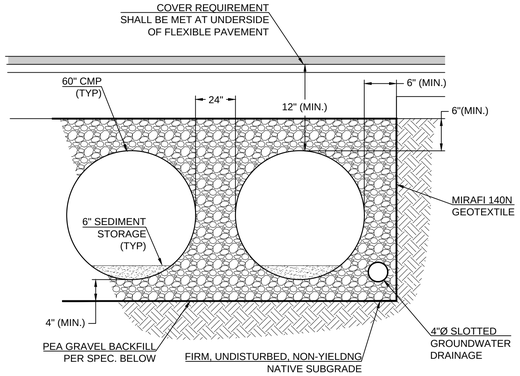
3 BIORETENTION FACILITY SECTION
NTS



7 HEAVY DUTY PAVEMENT SECTION
SCALE: NTS



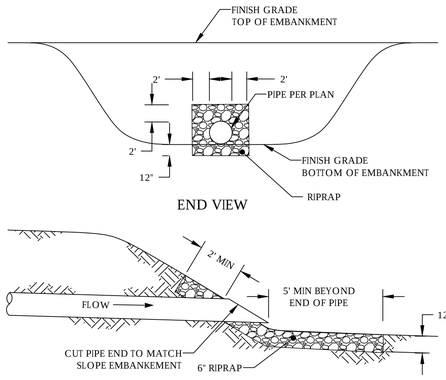
8 PERMEABLE PAVER SECTION
SCALE: NTS



THE TANK BACKFILL SHALL BE PEA GRAVEL. PEA GRAVEL BEDDING SHALL BE A CLEAN MIXTURE FREE FROM ORGANIC MATTER AND CONFORMING TO THE FOLLOWING GRADATION WHEN TESTED IN ACCORDANCE WITH ASTM-D422:

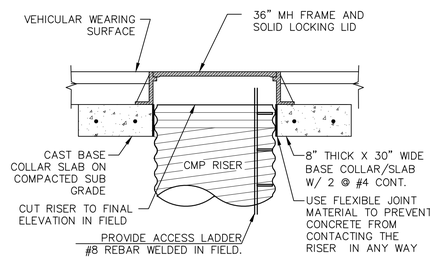
US STANDARD SIEVE SIZE	PERCENT PASSING BY WEIGHT
2"	100
1"	95-100
#8	0-10
#200	0-3

4 CORRUGATED METAL PIPE DETENTION TANK BACKFILL
SCALE: NTS



5 STORM PIPE OUTLET DETAIL
NTS

NOTES:
1. THE BASE COLLAR/SLAB SHALL BE CLASS 3,000 CONCRETE.
2. THE FLEXIBLE JOINT MATERIAL (RECYCLED VINYL OR EQ.) TO BE STIFF ENOUGH SO THAT THE CONCRETE CAN NEVER ENGAGE WITH THE RISER CORRUGATIONS.



6 MANHOLE AT ACCESS RISER
SCALE: NTS

PRELIMINARY

DRAWING NOT TO SCALE

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STREET AND
STORM DETAILS

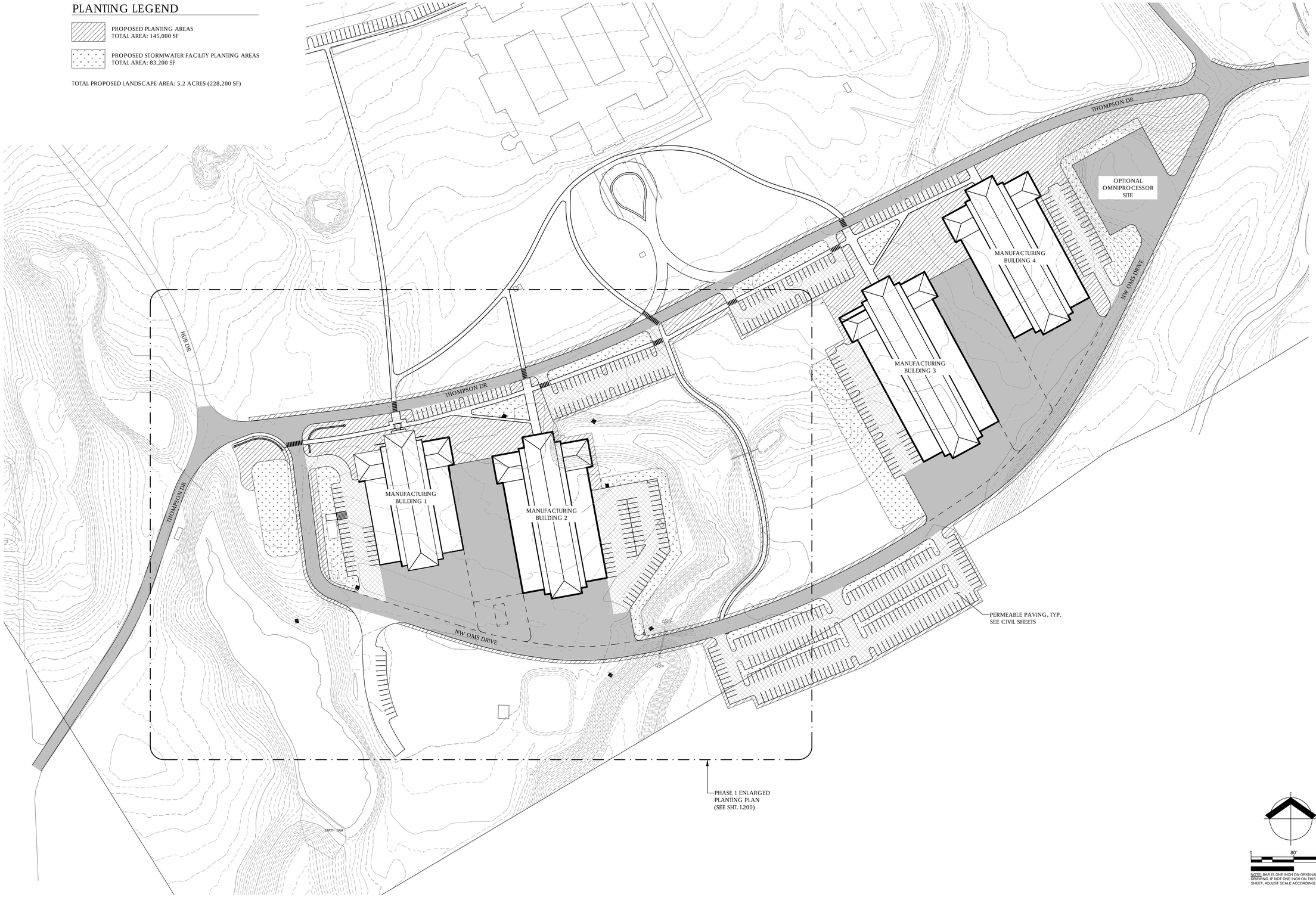
C600

PLANTING LEGEND

PROPOSED PLANTING AREAS
TOTAL AREA: 145,000 SF

PROPOSED STORMWATER FACILITY PLANTING AREAS
TOTAL AREA: 83,200 SF

TOTAL PROPOSED LANDSCAPE AREA: 5.2 ACRES (228,200 SF)



0 80' 160'

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ZONE A - SOUTHERN INFLUENCE AREA PLANTING PLAN

L100

PLANTING LEGEND

PROPOSED SCREENING PLANTING AREAS
TOTAL AREA: 15,122 SF
(SEE DETAIL 1, SHT L300)

PROPOSED PARKING LOT PLANTING AREAS
TOTAL AREA: 3,015 SF
(SEE DETAIL 4, SHT L300)

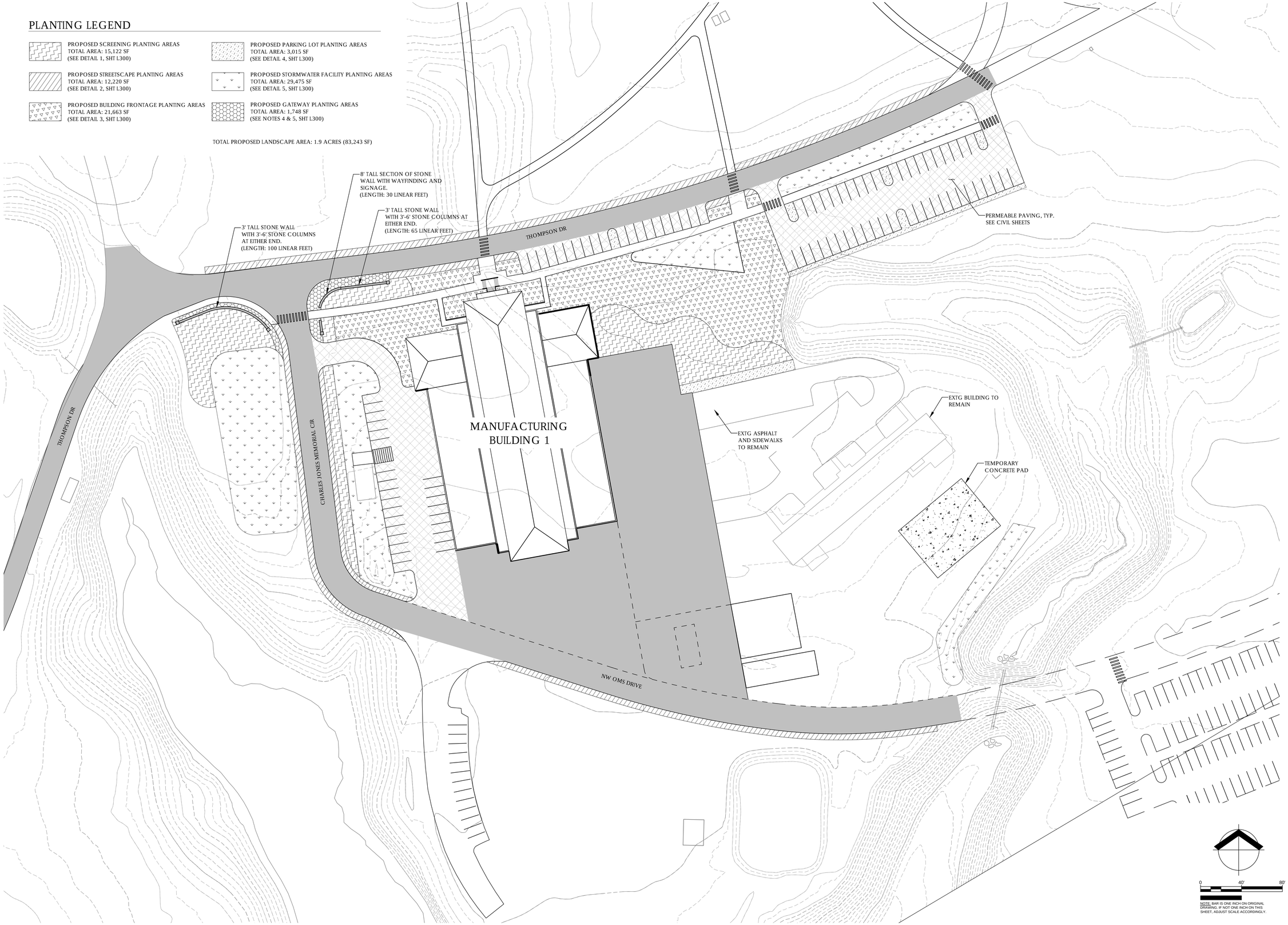
PROPOSED STREETSCAPE PLANTING AREAS
TOTAL AREA: 12,220 SF
(SEE DETAIL 2, SHT L300)

PROPOSED STORMWATER FACILITY PLANTING AREAS
TOTAL AREA: 29,475 SF
(SEE DETAIL 5, SHT L300)

PROPOSED BUILDING FRONTAGE PLANTING AREAS
TOTAL AREA: 21,663 SF
(SEE DETAIL 3, SHT L300)

PROPOSED GATEWAY PLANTING AREAS
TOTAL AREA: 1,748 SF
(SEE NOTES 4 & 5, SHT L300)

TOTAL PROPOSED LANDSCAPE AREA: 1.9 ACRES (83,243 SF)



0 40' 80'

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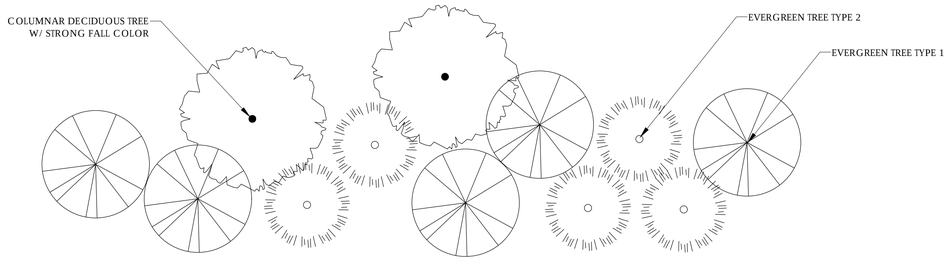
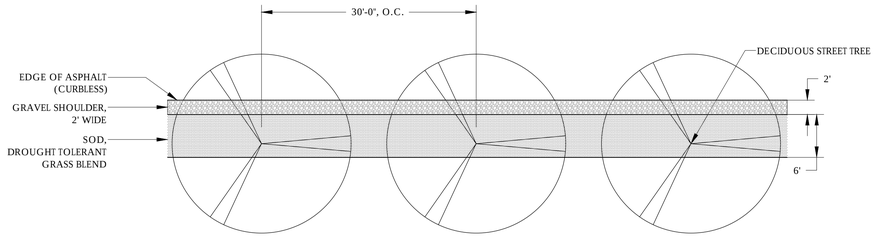
PHASE 1 ENLARGED PLANTING PLAN

L200



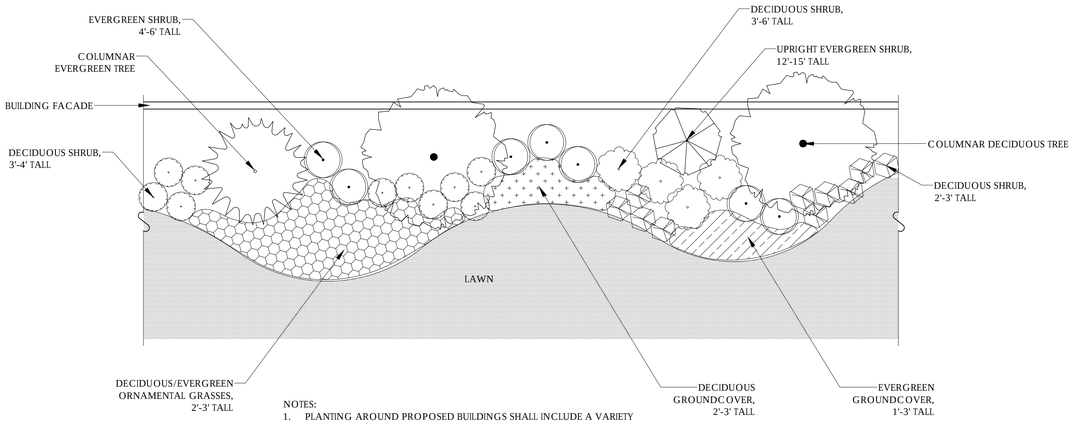
NOTES:
1. THE SCREENING PLANTING SHALL INCLUDE A DOUBLE ROW OF EVERGREEN TREES WITH INTERMITTENT COLUMNAR DECIDUOUS TREES AT A TRIANGULAR LAYOUT AS SHOWN.

1 TYPICAL SCREENING PLANTING PLAN DETAIL
NTS



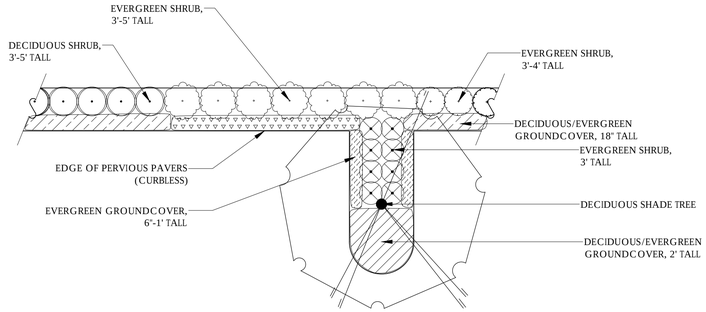
NOTES:
1. GRAVEL SHOULDERS ARE ALONG BOTH SIDES OF THOMPSON DR ONLY.
2. CHARLES JONES MEMORIAL CIR AND NW OMS DR SHALL HAVE SOD INSTALLED TO THE EDGE OF ASPHALT IN STREETSCAPE PLANTING AREAS AS SHOWN ON SHT. L100.

2 TYPICAL STREETSCAPE PLANTING PLAN DETAIL
NTS



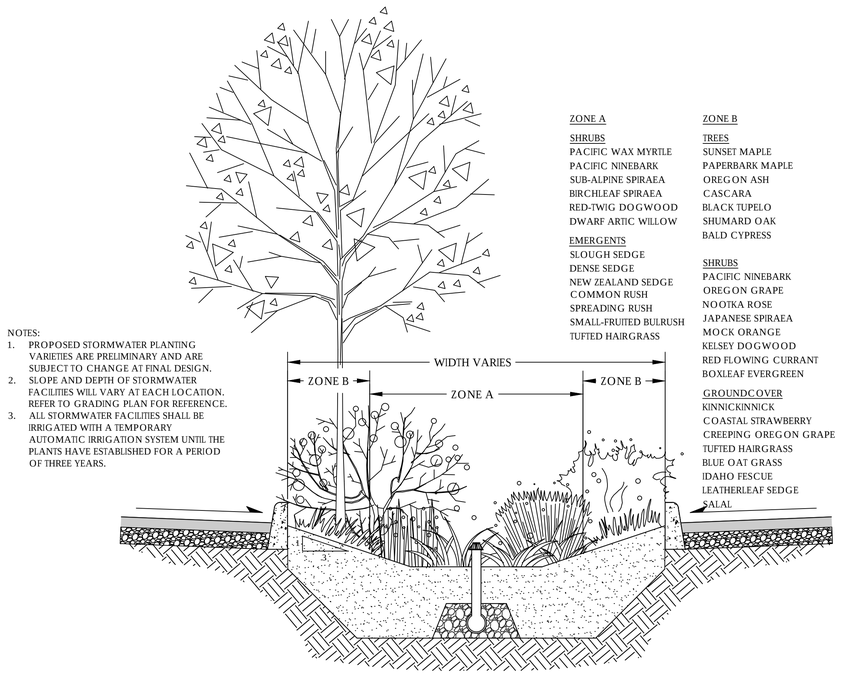
NOTES:
1. PLANTING AROUND PROPOSED BUILDINGS SHALL INCLUDE A VARIETY OF DECIDUOUS AND EVERGREEN TREES, SHRUBS AND GROUNDCOVERS IMMEDIATELY ADJACENT TO THE BUILDING FACADE WITH THE MAJORITY OF THE LANDSCAPE AREA SODDED WITH A DROUGHT TOLERANT GRASS BLEND.
2. THE EDGE OF LAWN SHALL BE A SMOOTH CONTINUOUS REVERSE CURVE THAT FOLLOWS THE BUILDING FACADE.

3 TYPICAL BUILDING FRONTAGE PLANTING PLAN DETAIL
NTS



4 TYPICAL PARKING LOT PLANTING PLAN DETAIL
NTS

NOTES:
1. PROPOSED STORMWATER PLANTING VARIETIES ARE PRELIMINARY AND ARE SUBJECT TO CHANGE AT FINAL DESIGN.
2. SLOPE AND DEPTH OF STORMWATER FACILITIES WILL VARY AT EACH LOCATION. REFER TO GRADING PLAN FOR REFERENCE.
3. ALL STORMWATER FACILITIES SHALL BE IRRIGATED WITH A TEMPORARY AUTOMATIC IRRIGATION SYSTEM UNTIL THE PLANTS HAVE ESTABLISHED FOR A PERIOD OF THREE YEARS.



ZONE A

SHRUBS
PACIFIC WAX MYRTLE
PACIFIC NINEBARK
SUB-ALPINE SPIRAEA
BIRCHLEAF SPIRAEA
RED-TWIG DOGWOOD
DWARF ARTIC WILLOW

EMERGENTS
SLOUGH SEDGE
DENSE SEDGE
NEW ZEALAND SEDGE
COMMON RUSH
SPREADING RUSH
SMALL-FRUITED BULRUSH
TUFTED HAIRGRASS

ZONE B

TREES
SUNSET MAPLE
PAPERBARK MAPLE
OREGON ASH
CASCARA
BLACK TUPELO
SHUMARD OAK
BALD CYPRESS

SHRUBS
PACIFIC NINEBARK
OREGON GRAPE
NOOTKA ROSE
JAPANESE SPIRAEA
MOCK ORANGE
KELSEY DOGWOOD
RED FLOWING CURRANT
BOXLEAF EVERGREEN

GROUNDCOVER
KINNICKINNICK
COASTAL STRAWBERRY
CREEPING OREGON GRAPE
TUFTED HAIRGRASS
BLUE OAT GRASS
IDAHO FESCUE
LEATHERLEAF SEDGE
SALAL

5 TYPICAL STORMWATER FACILITY PLANTING DETAIL
NTS

GENERAL LANDSCAPE NOTES:

1. ALL DELINEATED WETLAND AND BUFFER IMPACTS WILL BE MITIGATED OFF-SITE AT AN APPROVED MITIGATION BANK PER WETLAND REPORT PREPARED BY OTHERS.
2. ALL SPECIFIED PLANT MATERIALS SHALL MEET THE STANDARDS SET FORTH IN THE LATEST EDITION OF AMERICAN STANDARD FOR NURSERY STOCK, PUBLISHED BY AMERICAN ASSOCIATION OF NURSERYMEN, INC.
3. ALL PROPOSED PLANT SIZING SHALL CONFORM TO THE FOLLOWING:
   EVERGREEN TREES: 8' HT MIN.
   DECIDUOUS TREES: 1.5" CAL, 10' HT MIN.
   EVERGREEN SHRUBS: 2 - 5 GAL
   DECIDUOUS SHRUBS: 2 - 5 GAL
   GROUNDCOVERS: 1 GAL
4. STONE WALL FEATURES AT INTERSECTION OF THOMPSON DR. AND CHARLES JONES MEMORIAL CIR. SHALL BE 3' TALL EXCEPT THE 8' SECTION PER SHT. L100. THE WALL SHALL BE CONSTRUCTED WITH AN 8" WIDE CMU CORE AND A CONCRETE FOOTING WITH A 5" THICK STONE VENEER AND CAP. THE FINISHED WALL WILL BE 2' WIDE WITH 3' WIDE COLUMNS AT EACH END. THE ROCK SHALL BE LOCALLY SOURCED AND MATCH EXISTING ROCK WALLS ALONG THOMPSON DR.
5. GATEWAY LANDSCAPING ALONG FRONT OF PROPOSED STONE WALLS SHALL INCLUDE LOW GROWING DECIDUOUS AND EVERGREEN GROUNDCOVERS AND PERENNIALS TO MATCH EXISTING GATEWAY AND STONE WALL FEATURES. SEE SHT L100 FOR GATEWAY PLANTING AREAS.
6. ALL PROPOSED LANDSCAPE AREAS SHALL BE IRRIGATED BY AN AUTOMATIC IRRIGATION SYSTEM.

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PLANTING DETAILS

L300