

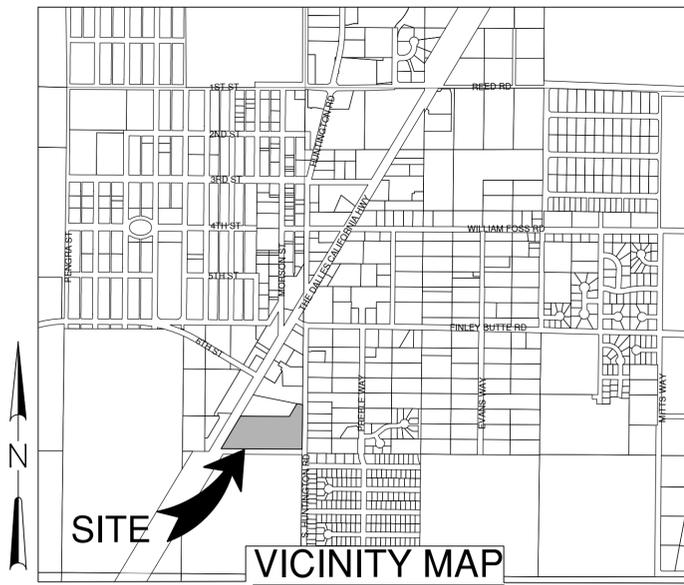
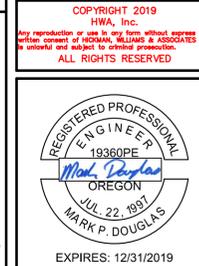
LA PINE SAND SHED

DESCHUTES COUNTY ROAD DEPT.

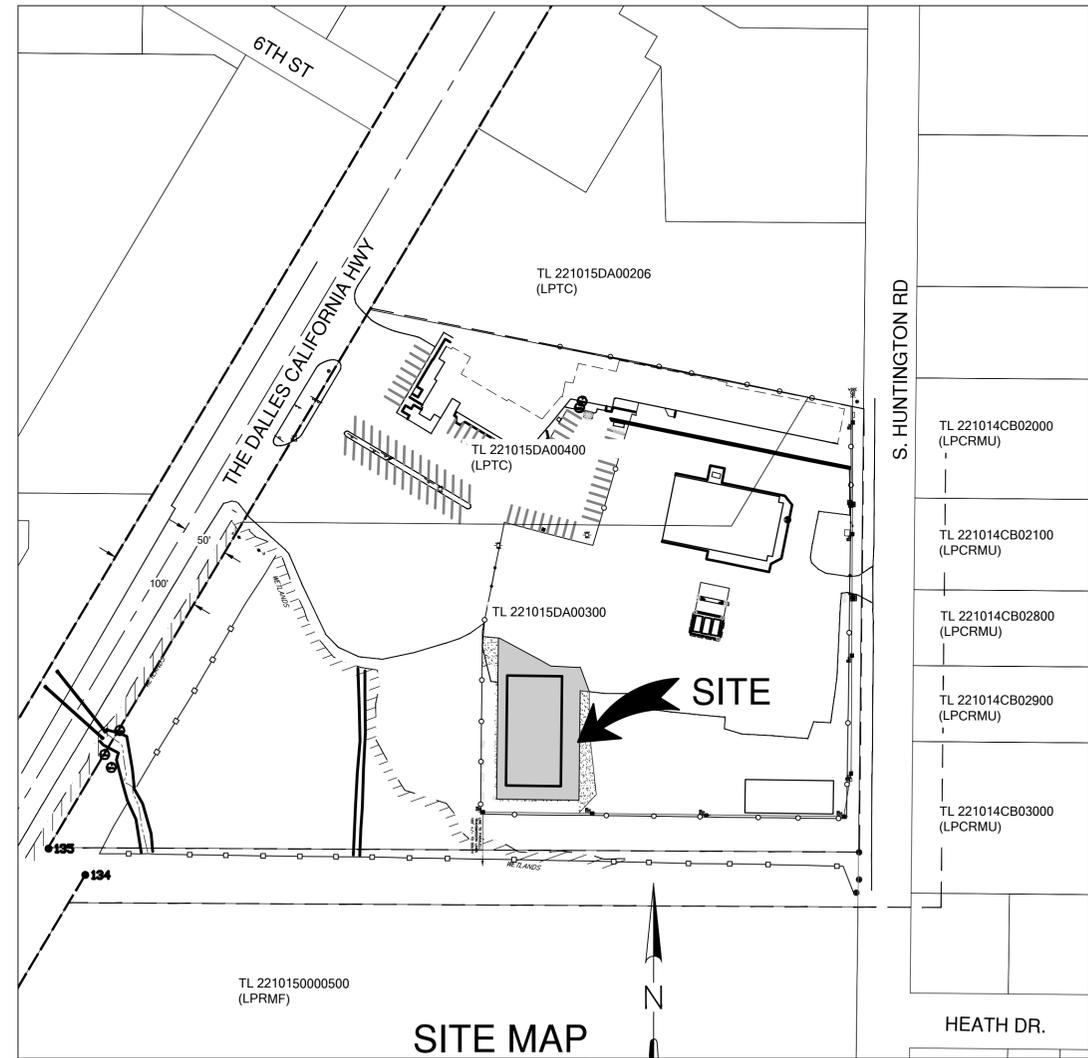
APRIL 2019

CITY OF LA PINE, DESCHUTES COUNTY, OR

OWNER/DEVELOPER
 DESCHUTES COUNTY ROAD DEPT.
 61150 SE 27TH ST
 BEND, OR 97702
 P: (541) 388-6581



VICINITY MAP
 SCALE: 1"=1000'



SITE MAP
 SCALE: 1"=100'

SHEET INDEX:

- C1.1 COVER SHEET
- C2.1 EXISTING CONDITIONS, DEMO & EROSION CONTROL
- C3.1 SITE/GRADING PLAN

LEGEND

PROPOSED	
	EDGE OF PAVEMENT
	GRAVEL EDGE
	BUILDING FOOTPRINT
	UNDERGROUND POWER
	BOTTOM OF SWALE
	TOP OF SWALE
	PROPOSED SILT FENCE
	PROPOSED SAWCUT
	PROPOSED AC DEMO
	ASPHALT PAVING
	CONCRETE (FOUNDATION)
	GRAVEL (3/4"-0")
	CONTOUR LINE, 5' INTERVAL
	CONTOUR LINE, 1' INTERVAL
EXISTING	
	PROPERTY BOUNDARY
	EDGE OF PAVEMENT
	BUILDING
	CONCRETE
	BARBED WIRE FENCE
	CHAIN LINK FENCE
	PARKING STRIPING
	RIGHT OF WAY
	CENTERLINE
	IRRIGATION DITCH
	OVERHEAD POWERLINE
	SIGN
	BOLLARD (STORAGE BINS)
	LIGHT POLE
	FUEL PUMP
	JERSEY BARRIER
	POWER POLE
	GUY ANCHOR
	CATCH BASIN
	TREE
	CONTOUR, MINOR
	CONTOUR, MAJOR
	ABOVE GROUND FUEL TANK
	DRAINAGE SWALE
	WETLAND
	LANDSCAPE

GENERAL EROSION CONTROL NOTES

1. HOLD A PRE-CONSTRUCTION MEETING THAT INCLUDES THE INSPECTOR TO DISCUSS EROSION AND SEDIMENT CONTROL MEASURES AND CONSTRUCTION LIMITS.
2. THE ESC PLAN MUST BE KEPT ONSITE AT ALL TIMES WHEN WORK IS OCCURRING.
3. THE ESC MEASURES SHOWN ON THIS PLAN ARE MINIMUM REQUIREMENTS FOR ANTICIPATED SITE CONDITIONS. DURING THE CONSTRUCTION PERIOD, THE MEASURES MUST BE UPGRADED AS NEEDED TO COMPLY WITH ALL APPLICABLE LOCAL, STATE, AND FEDERAL EROSION AND SEDIMENT CONTROL REGULATIONS.
4. INSPECT ALL ROADWAYS ADJACENT TO THE CONSTRUCTION ACCESS ROUTE AT THE END OF EACH DAY. SIGNIFICANT AMOUNTS OF SEDIMENT THAT LEAVES THE CONSTRUCTION SITE MUST BE CLEANED UP WITHIN 24-HRS AND STABILIZED BACK ON THE SITE OR PROPERLY DISPOSED. THE CAUSE OF SEDIMENT RELEASE MUST BE IDENTIFIED AND PREVENTED FROM CAUSING A RECURRENCE OF THE DISCHARGE WITHIN THE SAME 24-HRS. VACUUMING OR DRY SWEEPING MUST BE USED TO CLEAN-UP RELEASED SEDIMENT AND SEDIMENT MUST NOT BE INTENTIONALLY WASHED INTO STORM SEWERS, DRAINAGE WAYS, OR WATER BODIES.
5. COVER AND SECURE ALL DUMP TRUCK LOADS LEAVING THE CONSTRUCTION SITE TO MINIMIZE SPILLAGE ON ROADS.
6. RESTORE CONSTRUCTION ACCESS ROUTE EQUAL TO OR BETTER THAN THE PRE-CONSTRUCTION CONDITION.
7. CONTROL FUGITIVE DUST FROM CONSTRUCTION ACTIVITY.
8. STABILIZE EXPOSED UNWORKED SOILS (INCLUDING STOCKPILES), WHETHER AT FINAL GRADE OR NOT, WITHIN 10 CALENDAR DAYS DURING THE REGIONAL DRY SEASON (JULY 1 - SEPT. 30) AND WITHIN 5 CALENDAR DAYS DURING THE REGIONAL WET SEASON (OCT. 1 - JUNE 30).
9. PROTECT INLETS, DRYWELLS, CATCH BASINS AND OTHER STORMWATER MANAGEMENT FACILITIES FROM SEDIMENT, WHETHER OR NOT THE FACILITIES ARE OPERABLE.
10. WHENEVER POSSIBLE, CONSTRUCT STORMWATER CONTROL FACILITIES (DETENTION/RETENTION STORAGE POND OR SWALES) BEFORE GRADING BEGINS. THESE FACILITIES SHOULD BE OPERATIONAL BEFORE THE CONSTRUCTION OF IMPERVIOUS SITE IMPROVEMENTS.
11. STOCKPILE MATERIALS (SUCH AS TOPSOIL) ONSITE, KEEPING OFF ROADWAYS AND SIDEWALKS.
12. COVER, CONTAIN AND PROTECT ALL CHEMICALS, LIQUID PRODUCTS, PETROLEUM PRODUCTS, AND NON-INERT WASTES PRESENT ONSITE FROM VANDALISM. MAINTAIN A SUPPLY OF MATERIALS ON HAND TO ADDRESS AND CONTAIN SPILLS.
13. LOCATE DESIGNATED VEHICLE AND EQUIPMENT SERVICE AREAS, FUEL, AND MATERIALS AWAY FROM DRAINAGE INLETS, WATERCOURSES, AND CANALS. PROPERLY CONTAIN AREAS USING BERMS, SANDBAGS, OR OTHER BARRIERS. REGULARLY INSPECT AND MAINTAIN EQUIPMENT, ESPECIALLY FOR DAMAGED HOSES AND LEAKY GASKETS.
14. DESIGNATE AN AREA FOR CLEANING PAINTING EQUIPMENT AND TOOLS. NEVER CLEAN BRUSHES OR RINSE CONTAINERS INTO THE STREET, GUTTER, DRAINAGE INLET, OR WATERWAY.
15. INSPECT ON A REGULAR BASIS (AT A MINIMUM WEEKLY, AND DAILY DURING/AFTER A RUNOFF PRODUCING STORM EVENT) AND MAINTAIN ALL EROSION AND SEDIMENT CONTROL BMPs TO ENSURE SUCCESSFUL PERFORMANCE OF THE BMPs.
16. REMOVE TEMPORARY ESC BMPs WITHIN 30 DAYS AFTER THE TEMPORARY BMPs ARE NO LONGER NEEDED. PERMANENTLY STABILIZE AREAS THAT ARE DISTURBED DURING THE REMOVAL PROCESS.

GRADING NOTES

1. ALL GRADING SHALL BE IN CONFORMANCE WITH THE CURRENT 2014 OREGON STRUCTURAL SPECIALTY CODE AND WITH DESCHUTES COUNTY GRADING, EXCAVATION, AND STORMWATER MANAGEMENT STANDARDS.
2. SUBGRADE MATERIAL SHALL BE COMPACTED TO A RELATIVE COMPACTION OF 95% IN THE ZONE BETWEEN FINISHED SUBGRADE AND ONE FOOT BELOW. ALL MATERIAL IN FILL SECTIONS BELOW THE ZONE MENTIONED ABOVE SHALL BE COMPACTED TO 95% RELATIVE COMPACTION.
3. EXCAVATORS SHALL COMPLY WITH THE PROVISIONS OF OAR 952-001-0090.
4. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO CONTACT "UNDERGROUND LOCATE SERVICE" AT 1-800-332-2344 AT LEAST 2 FULL BUSINESS DAYS PRIOR TO THE START OF CONSTRUCTION FOR LOCATION OF UNDERGROUND WATER, SEWER, STORM DRAIN, POWER, GAS, OIL, CABLE TV, AND TELEPHONE FACILITIES.
5. ALL UNSUITABLE SOILS MATERIALS, RUBBISH, AND DEBRIS RESULTING FROM GRADING OPERATIONS SHALL BE REMOVED FROM THE JOB SITE AND DISPOSED OF PROPERLY.
6. THE CONTRACTOR SHALL EMPLOY ALL LABOR, EQUIPMENT, AND METHODS REQUIRED TO PREVENT HIS OPERATIONS FROM PRODUCING DUST IN AMOUNTS DAMAGING TO PROPERTY, CULTIVATED VEGETATION, AND DOMESTIC ANIMALS OR CAUSING A NUISANCE TO PERSONS OCCUPYING BUILDINGS IN THE VICINITY OF THE JOB SITE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE CAUSED BY DUST RESULTING FROM HIS OPERATIONS.
7. CUT SLOPES IN SOIL AND LOOSE ROCK RUBBLE SHALL NOT EXCEED A RATIO OF 2 HORIZONTAL TO 1 VERTICAL UNLESS PREVIOUSLY APPROVED BY ENGINEER. CUT SLOPES IN SOLID ROCK SHALL NOT EXCEED A RATIO OF 1/2 HORIZONTAL TO 1 VERTICAL. FILL SLOPES SHALL NOT EXCEED A RATIO OF 3 HORIZONTAL TO 1 VERTICAL UNLESS PREVIOUSLY APPROVED BY ENGINEER.
9. THE PROPOSED DRAINAGE SYSTEM HAS BEEN DESIGNED TO PROVIDE WATER QUALITY TREATMENT AND FLOW CONTROL FOR THE 25-YEAR STORM EVENT WITH A SAFE OVERFLOW PATH FOR THE 100-YEAR STORM EVENT.



DESCHUTES COUNTY ROAD DEPT.
 SAND SHED
 LA PINE, OR
 COVER SHEET



REVISIONS	
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 DRAWN BY: DL
 CHECKED BY: MD
 SCALE: AS SHOWN
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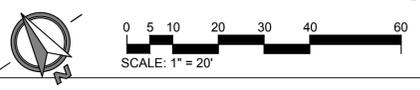
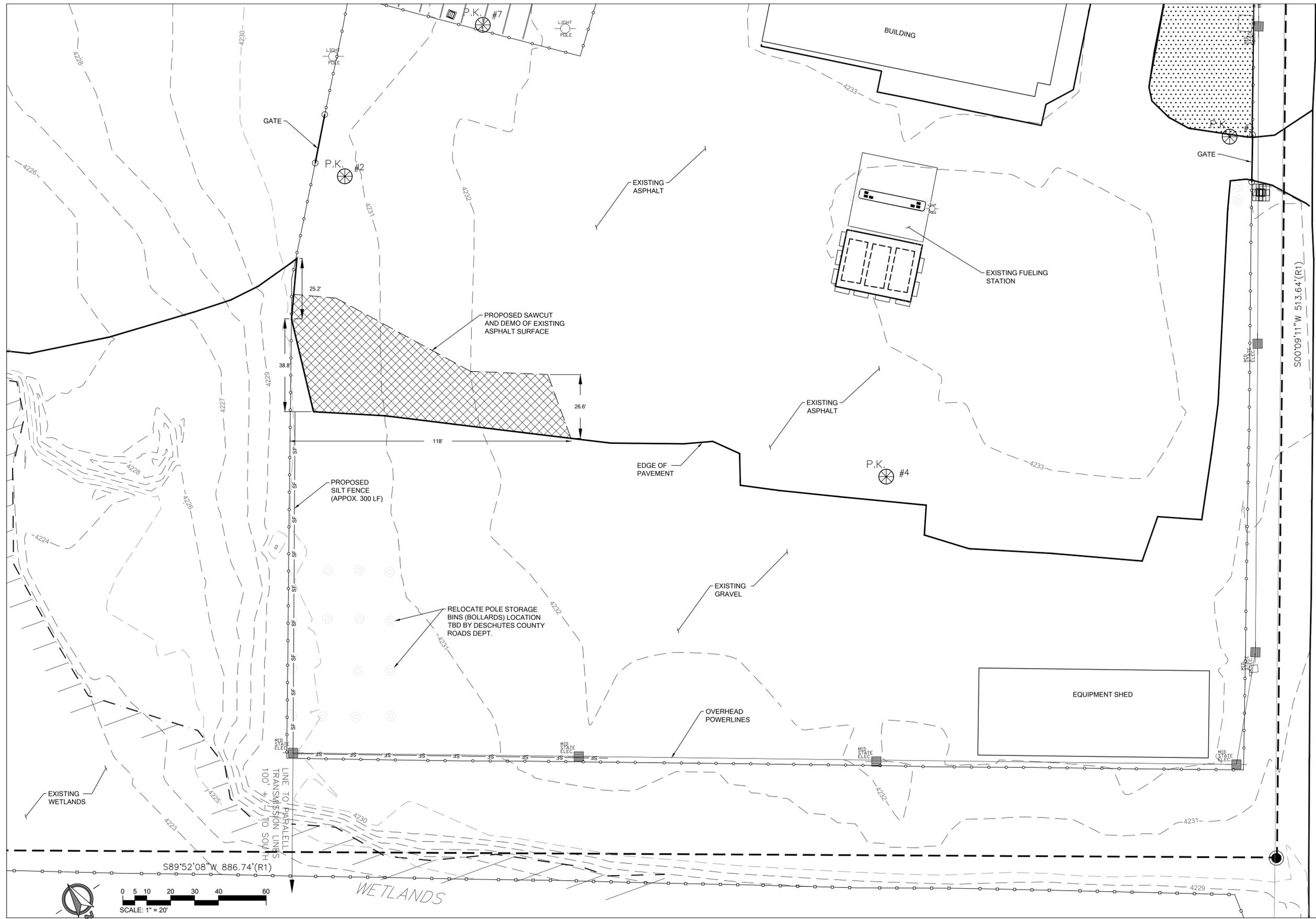
DATE: 04/05/2019

SHEET
C1.1

HWA# 180513

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Dani S:\Land Projects\180513 LoPine Sand Shed.dwg 180513-C-CD00.dwg Fri Apr 05 2019 - 9:27am



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DESCHUTES COUNTY ROAD DEPT.
SAND SHED
LA PINE, OR
EX COND / SED & ECP / DEMO

HWA
CIVIL ENGINEERING | SURVEYING | PLANNING
60300 OS. BILEY ROAD, STE. 100, BEND, OR 97703
WEB: WWW.HWA.INC

REVISIONS	
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FILE: 180513-C-CD00.dwg

DATE:
04/05/2019

SHEET
C2.1

HWA# 180513

DEVELOPMENT DATA

TAXLOT: 221015DA00300
 MAILING ADDRESS: DESCHUTES COUNTY, PROPERTY & FACILITIES DEPT, PO BOX 6005, BEND, OR 97708-6005
 TOTAL SITE AREA: 6.7 ACRES (292,000 S.F.)
 PROPOSED PAVEMENT AREA: 13,100 S.F. (APPROX. 5%)
 PROPOSED BUILDING SQ. FT.: 7,200 S.F. (APPROX. 2.5%)
 PROPOSED LANDSCAPE SWALE: 2,000 S.F. (APPROX. 1%)

CONSTRUCTION ACCESS THROUGH EXISTING GATE

NOTE: THE PROPOSED BUILDING IS AN OPEN AIR METAL STRUCTURE THAT HOUSES NON-COMBUSTIBLE MATERIAL (SAND AND ROCK). FIRE CODE WATER SUPPLY REQUIREMENTS, OFC SECTION 507, DO NOT APPLY TO THIS SITE. FIRE VEHICLE ACCESS WILL BE PROVIDED THROUGH EXISTING GATE.

MAINTAIN ACCESS TO FUELING STATION

PROPOSED EXTERIOR LIGHT DIRECTLY OVER THE OPENING OF STRUCTURE

PROPOSED METER LOCATION OUTSIDE OF BUILDING TO BE DETERMINED BY ELECTRICAL CONTRACTOR. (MAIN DISCONNECT TO BE LOCATED AT METER BASE)

EXISTING ASPHALT

PROPOSED UNDERGROUND POWER TO BUILDING
 • 3" SCHEDULE 40 GRAY PVC
 • 36" MINIMUM BURY DEPTH
 • TRENCH TO BE INSPECTED BY MID STATE ELECTRIC
 • CONTRACTOR TO BACKFILL & RESTORE GRAVEL SURFACE TO EXISTING STATE

PROPOSED ASPHALT EDGE, SEE TYPICAL SECTIONS (THIS SHEET)

PROPOSED BUILDING (7,200 SQ.FT), SEE STRUCTURAL SHEET S2.1 FOR FOOTING DETAILS AND DIMENSIONS

EXISTING GRAVEL

MAINTAIN ACCESS TO EXISTING SHED

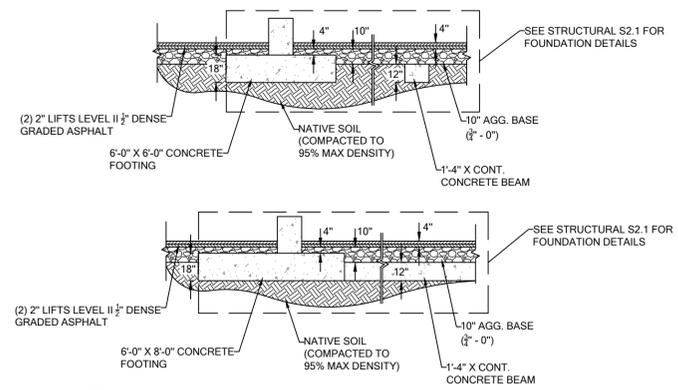
PROPOSED STAGING & MATERIAL STOCKPILE AREA

PROPOSED CONNECTION TO MID STATE POWER POLE

PROPOSED INFILTRATION SWALE, SEE DETAIL 3/C3.1 (THIS SHEET)

LINE TO PARALLEL TRANSMISSION LINES 100' TO SOUTH

WETLANDS



DRAINAGE BASIN DESIGN

BASIN I.D.	AREA (SQ.FT.)	AREA (AC)	25-YR STORM PEAK RUNOFF RATE (CFS)	TOTAL 25-YR STORM RUNOFF VOLUME (CU.FT.)	STORAGE FACILITY CAPACITY (CU. FT.)
SITE	13,100	0.30	1,047	2,420	2,760

NOTE: NOAA ATLAS 2 - VOLUME X PRECIPITATION VALUES:
 25-YR = 2.6 IN.
 STORM TYPE - 2A
 CN = 98
 PROPOSED INFILTRATION SWALE HAS BEEN SIZED TO PROVIDE STORAGE FOR SURFACE RUNOFF FROM THE 25-YR-24-HR STORM EVENT.

1 PLAN VIEW
SCALE: 1"=20'

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REGISTERED PROFESSIONAL ENGINEER
 19360PE
 Mark Douglas
 OREGON
 JUL 22, 1991
 MARK P. DOUGLAS
 EXPIRES: 12/31/2019

DESCHUTES COUNTY ROAD DEPT.
 SAND SHED
 LA PINE, OR
 SITE / GRD DRG PLAN

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DATE: 04/05/2019

SHEET
C3.1
 HWA# 180513

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GENERAL STRUCTURAL NOTES

GENERAL NOTES:

- ALL CONSTRUCTION AND DESIGN SHALL CONFORM TO THE 2012 INTERNATIONAL BUILDING CODE AS AMENDED BY THE STATE OF OREGON (2014 OSSC).
- THE STRUCTURAL DRAWINGS SHALL BE UTILIZED IN CONJUNCTION WITH OTHER DESIGN CONSULTANT'S DRAWINGS (ARCHITECTURAL, MECHANICAL, ETC.). IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE THE REQUIREMENTS OF THE DRAWINGS INTO THEIR SHOP DRAWINGS AND CONSTRUCTION.
- THE GENERAL STRUCTURAL NOTES ARE INTENDED FOR USE IN CONJUNCTION WITH THE PROJECT SPECIFICATIONS. IN THE EVENT OF A CONFLICT BETWEEN THE TWO, THE GENERAL STRUCTURAL NOTES SHALL SUPERCEDE THE PROJECT SPECIFICATIONS. ANY DISCREPANCY SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER AND ENGINEER.
- CONSTRUCTION SEQUENCE AND METHODS:**
 - THE STRUCTURAL DRAWINGS ARE INTENDED FOR THE STRUCTURE TO ACT AS A WHOLE ONCE CONSTRUCTION IS COMPLETE. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE SAFETY AND STABILITY (I.E. TEMPORARY BRACING IF REQUIRED) DURING CONSTRUCTION AS A RESULT OF CONSTRUCTION METHODS AND SEQUENCES.
 - THE CONTRACTOR SHALL TAKE INTO ACCOUNT COLD WEATHER CONSTRUCTION AND THE EFFECTS OF THERMAL MOVEMENT DURING THE CONSTRUCTION SCHEDULE.
 - NON-CANTILEVERED OR RESTRAINED RETAINING WALLS SHALL NOT BE BACKFILLED UNTIL THE WALL HAS BEEN TIED INTO THE LOWER AND UPPER SLAB SUPPORTS UNLESS ADEQUATE ENGINEERED BRACING HAS BEEN PROVIDED.
- THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS. THE ENGINEER AND/OR ENGINEER SHALL BE NOTIFIED OF ANY DISCREPANCY BETWEEN THE EXISTING CONDITIONS AND CONSTRUCTION DOCUMENTS.

SUBMITTALS:

- SHOP DRAWINGS FOR ALL STRUCTURAL ITEMS SHALL BE SUBMITTED TO THE ENGINEER PRIOR TO FABRICATION AND CONSTRUCTION. SUCH ITEMS INCLUDE:
 - CONCRETE MIX DESIGNS, CONCRETE AND MASONRY REINFORCEMENT EMBEDDED STEEL ITEMS AND STRUCTURAL STEEL.
 - SHOP DRAWINGS OR CONTRACTOR ENGINEERED DETAILS SHALL BEAR THE SEAL AND SIGNATURE OF A REGISTERED STRUCTURAL ENGINEER IN THE STATE OF OREGON IF IT DIFFERS FROM THE DESIGN OF THE STRUCTURAL DRAWINGS. ANY REVISION FROM THE STRUCTURAL DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND IS SUBJECT TO THE REVIEW AND ACCEPTANCE BY THE ENGINEER.
- CALCULATIONS, DESIGN DRAWINGS, AND SHOP DRAWINGS FOR THE DESIGN, FABRICATION, AND CONSTRUCTION OF BIDDER DESIGN ITEMS SHALL BEAR THE SEAL AND SIGNATURE OF A REGISTERED STRUCTURAL ENGINEER IN THE STATE OF OREGON AND SHALL BE SUBMITTED TO THE ENGINEER PRIOR TO FABRICATION.
- SEISMIC BRACING AND RESTRAINT TO THE STRUCTURE OF ANY MEP EQUIPMENT, MACHINERY, AND ASSOCIATED PIPING SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. CONNECTIONS NOT IN COMPLIANCE WITH SMACNA (SHEET METAL AND AIR CONDITIONING CONTRACTOR'S NATIONAL ASSOCIATION) OR THE MEP DESIGN DRAWINGS, SHALL BEAR THE SEAL OF REGISTERED ENGINEER IN THE STATE OF OREGON AND SHALL BE SUBMITTED ALONG WITH CALCULATIONS TO THE ENGINEER FOR APPROVAL PRIOR TO FABRICATION.

DESIGN CRITERIA:

- CODE:** 2012 INTERNATIONAL BUILDING CODE AS AMENDED BY THE STATE OF OREGON (2014 OSSC).
- LOADS AND DESIGN CRITERIA:** THE FOLLOWING LIVE LOADS AND CRITERIA WERE USED IN ADDITION TO THE DEAD LOAD OF THE STRUCTURE.

LIVE LOADS:

ROOF	
GROUND SNOW LOAD	55 PSF
ROOF SNOW LOAD	42.5 PSF
SNOW EXPOSURE FACTOR	C _e =1.0
SNOW IMPORTANCE FACTOR	I _s =1.0
THERMAL FACTOR	C _t =1.1

SOIL CRITERIA:

ALLOW - SOIL BEARING VALUES	1500 PSF (W/ 1/3 INCREASE FOR SHORT TERM LATERAL LOADS)
RETAINING WALLS	
ACTIVE - UNRESTRAINED	35 PCF
ACTIVE - RESTRAINED	50 PCF
DYNAMIC	10 PSF UNIFORM LOAD FOR EACH FOOT OF WALL HEIGHT
PASSIVE	300 PCF (DEPENDENT UPON SOIL LAYER)
FRICITION COEFFICIENT	0.3

LATERAL CRITERIA:

WIND	110 MPH, EXPOSURE C
IMPORTANCE FACTOR (WIND)	I _w =1.0
SEISMIC	SEISMIC DESIGN CATEGORY "D"
IMPORTANCE FACTOR (SEISMIC)	I _e =1.0
	S _d : BY OTHERS
	S _{d1} : BY OTHERS
	BASE SHEAR BY OTHERS

CONCRETE AND REINFORCING STEEL:

- CONCRETE CONSTRUCTION SHALL CONFORM TO ACI 318-08 AND THE 2012 INTERNATIONAL BUILDING CODE AS AMENDED BY THE STATE OF OREGON (2014 OSSC).
- THE MINIMUM 28 DAY CONCRETE STRENGTHS SHALL BE AS FOLLOWS:
 - F_c = 3000 PSI..... FOR ALL USES UNLESS NOTED OTHERWISE
 - (note: DESIGN BASED ON F_c = 2500 PSI, SPECIAL INSPECTION NOT REQUIRED)
- CONCRETE MIX DESIGNS, ALONG WITH TEST DATA AS REQUIRED, SHALL BE SUBMITTED BY THE CONTRACTOR AN ADEQUATE AMOUNT OF TIME PRIOR TO CONCRETE POURS.
- SPECIFIED CONCRETE STRENGTHS SHALL BE VERIFIED BY STANDARD 28-DAY CYLINDER TESTS PER ASTM C39.
- A 20% MAXIMUM OF THE CEMENT CONTENT MAY BE SUBSTITUTED WITH FLYASH CONFORMING TO ASTM C618, TYPE F OR C. HIGHER PERCENTAGES OF FLYASH MAY BE UTILIZED WITH ACCEPTANCE AND APPROVAL BY THE STRUCTURAL ENGINEER. ANY CONCRETE MIX UTILIZING FLYASH SHALL BE VERIFIED WITH TEST DATA.
- ADDITIONAL WATER SHALL NOT BE ADDED TO THE CONCRETE MIX AT THE JOBSITE. WATER REDUCING ADMIXTURES CONFORMING TO ASTM C494 MAY BE UTILIZED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
- IF CONCRETE IS TO BE POURED AGAINST AN EXISTING CONCRETE SURFACE, THE EXISTING SURFACE SHALL BE CLEANED AND ROUGHENED TO A MIN. 1/4" AMPLITUDE.
- SLEEVES, OPENINGS, CONDUITS, AND OTHER EMBEDDED ITEMS NOT SHOWN ON THE STRUCTURAL DRAWINGS SHALL BE APPROVED BY THE STRUCTURAL ENGINEER BEFORE POURING. CONDUITS EMBEDDED IN SLABS SHALL NOT BE LARGER IN OUTSIDE DIAMETER THAN ONE THIRD THE THICKNESS OF THE SLAB AND SHALL NOT BE SPACED CLOSER THAN THREE DIAMETERS ON CENTER. PROVIDE 3/4" CHAMFERS ON ALL EXPOSED CONCRETE EDGES UNLESS NOTED OTHERWISE.
- SHORING AND RESHORING:**
 - SHORING AND RESHORING SHALL CONFORM TO ACI 347R-88. SHORING AND SUPPORTING FORMWORK SHALL NOT BE REMOVED FROM HORIZONTAL MEMBERS BEFORE CONCRETE STRENGTH IS AT LEAST 70 PERCENT OF DESIGN STRENGTH, AS DETERMINED BY FIELD CURED CYLINDERS. IN ADDITION, SHORING SHALL NOT BE REMOVED SOONER THAN RECOMMENDED BY ACI 347R-88, SECTION 3.7.2.3. FORM WORK SHALL NOT BE REMOVED IN LESS THAN (10) DAYS.

REINFORCING STEEL:

- REINFORCING STEEL SHALL BE DETAILED, FABRICATED, AND INSTALLED ACCORDING TO THE "MANUAL OF STANDARD PRACTICE OF REINFORCED CONCRETE CONSTRUCTION" BY THE CONCRETE REINFORCING STEEL INSTITUTE (CRSI).
- REINFORCING STEEL SHALL CONFORM TO ASTM A615, GRADE 60.
- SMOOTH BARS OR WELDED WIRE FABRIC SHALL CONFORM TO ASTM A185.
- REINFORCING STEEL REQUIRING WELDING OR PLACED WITHIN A SPECIFIED BOUNDARY ELEMENT OR MOMENT FRAME ELEMENT SHALL CONFORM TO WELDABLE ASTM A706.
- ALL LAP SPLICES OF REINFORCEMENT SHALL CONFORM TO CLASS B LAPS AS SHOWN ON THE LAP SPLICE SCHEDULE PER UNLESS NOTED OTHERWISE.
- ANY MECHANICAL BAR SPLICES SHOWN SHALL BE MADE WITH DAYTON BAR-GRIP COUPLERS OR WITH AN APPROVED PRODUCT SUBMITTED WITH AN ICBO REPORT.
- UNLESS NOTED OTHERWISE, REINFORCING STEEL SHALL HAVE THE MINIMUM COVER OR PROTECTION FOR THE FOLLOWING USES AS NOTED BELOW:

BEAMS, JOISTS, AND COLUMNS	1 1/2" (TO TIES OR STIRRUPS)
SLABS	1"
WALLS	
INTERIOR FACES	3/4"
EXPOSED TO EARTH OR WEATHER	1 1/2" (#5 BARS AND SMALLER)
	2" (#6 BARS AND LARGER)
FOOTINGS	3"

ADDITIONAL CONCRETE ITEMS:

- HEADED SHEAR STUDS AND DEFORMED BAR ANCHORS SHALL BE AN APPROVED NELSON PRODUCT OR APPROVED EQUAL.
- WEDGE ANCHORS OR EXPANSION BOLTS SHALL BE HILTI KWIK BOLT-II OR AN APPROVED EQUAL SUBMITTED WITH ICBO REPORTS TO THE ENGINEER FOR REVIEW.
- EPOXY ANCHORS OR DOWELS SHALL BE INSTALLED WITH HILTI HY150 EPOXY IN CONCRETE AND HILTI HY20 EPOXY IN UNREINFORCED BRICK. AN APPROVED EQUAL WITH ICC REPORTS MAY BE SUBMITTED TO THE ENGINEER FOR APPROVAL.
- UNLESS NOTED OTHERWISE, PERMANENTLY EXPOSED EMBEDDED PLATE AND ANGLE ASSEMBLIES SHALL BE HOT DIPPED GALVANIZED AFTER FABRICATION. WELDS OR LOADS SHALL NOT BE PLACED ON THE EMBEDDED ASSEMBLIES FOR A MINIMUM OF (7) DAYS AFTER CASTING IN CONCRETE.

LAP SPLICE SCHEDULE

BAR SIZE	f _c = 3,000 psi			
	TOP BARS		OTHER BARS	
	CASE 1	CASE 2	CASE 1	CASE 2
#3	28	42	22	32
#4	37	56	29	43
#5	47	70	36	54
#6	56	84	43	64
#7	81	122	63	94
#8	93	139	72	107
#9	105	157	81	121
#10	118	177	91	136
#11	131	196	101	151

NOTES:

- LAP LENGTHS ARE IN INCHES AND ARE BASED ON GRADE 60 REINFORCING STEEL AND NORMAL WEIGHT CONCRETE.
- WHERE CLASS A LAP SPLICES ARE NOTED IN THE PLANS OR DETAILS, DIVIDE THE TABULATE VALUES BY 1.3.
- FOR LIGHTWEIGHT AGGREGATE CONCRETE, MULTIPLY THE TABULATED VALUES BY 1.3.
- TOP BARS ARE HORIZONTAL BARS WITH MORE THAN 12 INCHES OF CONCRETE CAST BELOW THE BARS.
- CASES 1 AND 2 ARE DEFINED AS FOLLOWS:
 - BEAMS OR COLUMNS: CASE 1: COVER AT LEAST 1.0 db AND c.c. SPACING AT LEAST 2.0 db (WHERE db = BAR DIAMETER)
 - CASE 2: COVER LESS THAN 1.0 db OR c.c. SPACING LESS THAN 2.0 db.
 - ALL OTHERS: CASE 1: COVER AT LEAST 1.0 db AND c.c. SPACING AT LEAST 3.0 db.
 - CASE 2: COVER LESS THAN 1.0 db OR c.c. SPACING LESS THAN 3.0 db.

SPECIAL INSPECTIONS:

- THE ITEMS NOTED SHALL BE INSPECTED IN ACCORDANCE WITH 2014 OSSC CHAPTER 17 BY A CERTIFIED SPECIAL INSPECTION FROM AN ESTABLISHED TESTING AGENCY. FOR MATERIAL SAMPLING AND TESTING REQUIREMENTS, REFER TO THE MATERIAL SAMPLING AND TESTING SECTION, THE PROJECT SPECIFICATIONS, AND THE SPECIFIC GENERAL NOTES SECTIONS. THE TESTING AGENCY SHALL SEND COPIES OF ALL STRUCTURAL TESTING AND INSPECTION REPORTS DIRECTLY TO THE ARCHITECT, ENGINEER, CONTRACTOR, AND BUILDING OFFICIAL. ANY MATERIALS WHICH FAIL TO MEET THE PROJECT SPECIFICATIONS SHALL IMMEDIATELY BE BROUGHT TO THE ATTENTION OF THE ENGINEER.
- SPECIAL INSPECTION TESTING REQUIREMENTS APPLY EQUALLY TO ALL BIDDER DESIGNED COMPONENTS. SPECIAL INSPECTION IS NOT REQUIRED FOR WORK PERFORMED BY AN APPROVED FABRICATOR PER 2014 OSSC SECTION 1704.2.5.2.
- CONTINUOUS SPECIAL INSPECTION MEANS THAT THE SPECIAL INSPECTOR IS ON SITE AT ALL TIMES OBSERVING THE WORK REQUIRING SPECIAL INSPECTION PER 2014 OSSC 1702. PERIODIC SPECIAL INSPECTION MEANS THAT THE SPECIAL INSPECTOR IS ON SITE AT TIME INTERVALS NECESSARY TO CONFIRM THAT ALL WORK REQUIRING SPECIAL INSPECTION IS IN COMPLIANCE.
- THE CONTRACTOR IS RESPONSIBLE FOR THE COORDINATION, SCHEDULING AND TIMELY NOTIFICATION OF THE DESIGNATED SPECIAL INSPECTOR PRIOR TO ALL WORK REQUIRING SPECIAL INSPECTION.

TABLE 1

REQUIRED GEOTECHNICAL SPECIAL INSPECTIONS					
SYSTEM or MATERIAL	IBC CODE REFERENCE	CODE or STANDARD REFERENCE	INSPECTION		REMARKS
			FREQUENCY		
			Continuous	Periodic	
SOILS					
GEOTECHNICAL INVESTIGATIONS	1803				GEOTECHNICAL INVESTIGATION SHALL INCLUDE ITEMS OF SPECIAL INSPECTION AND TESTING AS NOTED IN TABLE 5 OF THE GUIDELINES
VERIFY FOOTING BEARING CAPACITY AND SUBGRADE PREPARATION FOR FILLS				X	
FILL MATERIAL VERIFICATION	TABLE 1705.6	GEOTECHNICAL REPORT	X		BY THE GEOTECHNICAL ENGINEER
FILL PLACEMENT & COMPACTION			X		
VERIFY MATERIALS BELOW SHALLOW FOUNDATIONS ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY	TABLE 1705.6			X	BY THE GEOTECHNICAL ENGINEER
VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL	TABLE 1705.6			X	
PERFORM CLASSIFICATION OF COMPACTED FILL MATERIALS	TABLE 1705.6 1803.5.1			X	
VERIFY USE OF PROPER MATERIALS, DENSITIES AND LIFT THICKNESSES DURING PLACEMENT AND COMPACTION OF COMPACTED FILL	TABLE 1705.6			X	BY THE GEOTECHNICAL ENGINEER
PRIOR TO PLACEMENT OF COMPACTED FILL, OBSERVE SUBGRADE AND VERIFY THAT SITE HAS BEEN PREPARED PROPERLY	TABLE 1705.6			X	

DRAWING INDEX

S0.1 GENERAL STRUCTURAL NOTES & DRAWING INDEX

S2.1 ELEVATIONS, FOUNDATION PLAN & DETAILS

TABLE 2 REQUIRED STRUCTURAL SPECIAL INSPECTIONS					
SYSTEM or MATERIAL	IBC CODE REFERENCE	CODE or STANDARD REFERENCE	INSPECTION		REMARKS
			FREQUENCY		
			Continuous	Periodic	
CONCRETE					
INSPECTION OF ANCHORS POST-INSTALLED IN HARDENED CONCRETE MEMBERS	1909.1	ACI 318: 3.8.6, 8.1.3, 21.1.8		X	
REINFORCING STEEL AND PRESTRESSING TENDON PLACEMENT	1705.3 1910.4 1901.3.2	ACI 318: 3.5 ACI 318: 7.1-7.7		X	TOLERANCES AND REINFORCING PLACEMENT PER ACI 7.5; SPACING LIMITS FOR REINFORCING ACI 7.6
WELDING REINFORCING STEEL	TABLE 1705.3 1705.2.2.1 1903.1	ACI 318: 3.5.2 AWS D1.4			REFER TO STEEL FOR WELDING REQUIREMENTS TABLE 1705.2, ITEM 6b
1) VERIFICATION OF WELDABILITY OF REINFORCING STEEL OTHER THAN ASTM A 706	TABLE 1705.2	AWS D1.4 ACI 318: SECTION 3.5.2		X	
2) REINFORCING STEEL RESISTING FLEXURAL AND AXIAL FORCES IN INTERMEDIATE AND SPECIAL MOMENT FRAMES, AND BOUNDARY ELEMENTS OF SPECIAL STRUCTURAL WALLS OF CONCRETE AND SHEAR REINFORCEMENT	TABLE 1705.2	AWS D1.4 ACI 318: SECTION 3.5.2	X		
3) SHEAR REINFORCEMENT	TABLE 1705.2	AWS D1.4 ACI 318: SECTION 3.5.2	X		
4) OTHER REINFORCING STEEL	TABLE 1705.2	AWS D1.4 ACI 318: SECTION 3.5.2		X	
PLACEMENT OF BOLTS INSTALLED IN CONCRETE WHERE ALLOWABLE LOADS HAVE BEEN INCREASED OR WHERE STRENGTH DESIGN IS USED	TABLE 1705.3 1908.5 1909.1	ACI 318: 1.3.2.C ACI 318: 8.1.3 ACI 318: 21.1.8		X	ALL BOLTS VISUALLY INSPECTED
VERIFYING USE OF REQUIRED MIX DESIGN(S)	1904 1905.2 1910.2 1910.3 1901.4.1	ACI 318: CHAPTER 4 ACI 318: 5.2-5.4		X	
CONCRETE PLACEMENT	TABLE 1705.3 1905.9-10	ACI 318: 1.3.2.D ACI 318: 5.9 - 5.10	X		
SHOTCRETE PLACEMENT	TABLE 1705.3 1910.6-8		X		
CONCRETE PLACEMENT AT COMPOSITE SLABS	TABLE 1705.3	ASCE 9, CHAPTER 3	X		
CONCRETE/SHOTCRETE CURING	TABLE 1705.3 1910.9	ACI 318: 1.3.2.D ACI 318: 5.11-5.13		X	
VERIFICATION OF IN-SITU CONCRETE STRENGTH PRIOR TO STRESSING OF TENDONS IN POST-TENSIONED CONCRETE	TABLE 1705.3 1901.3.9	ACI 318: 18.13.4.3		X	
STRESSING OF TENDONS IN POST-TENSIONED CONCRETE	TABLE 1705.3 1901.3.10	ACI 318: 1.3.2.F ACI 318: 18.20.1	X		
INSPECTION OF PRESTRESSED CONCRETE:					
a. APPLICATION OF PRESTRESSING FORCES	TABLE 1705.3	ACI 318: 18.20		X	
b. GROUTING OF BONDED PRESTRESSING TENDONS IN THE SEISMIC-FORCE-RESISTING SYSTEM	TABLE 1705.3	ACI 318: 18.18.4		X	
ERECTION OF PRECAST MEMBERS	TABLE 1705.3	ACI 318: 1.3.2.E ACI 318: CHAPTER 16		X	ALL CONNECTIONS VISUALLY INSPECTED REFER TO ANCHOR BOLT WELDING REQUIREMENTS AND STRUCTURAL INTEGRITY PROVISIONS
VERIFICATION OF IN-SITU CONCRETE PRIOR TO REMOVAL OF FORMS AND SHORES FROM ELEVATED BEAMS AND STRUCTURAL SLABS	TABLE 1705.3	ACI 318: 6.2		X	
VERIFICATION OF FORMWORK	TABLE 1705.3	ACI 318: 6.1.1		X	SPECIAL INSPECTIONS APPLY TO SHAPE, LOCATION AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED



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Deschutes Co. Gravel Storage Building
LaPINE, OREGON

GENERAL STRUCTURAL NOTES,
SPECIAL INSPECTION TABLES &
DRAWING INDEX

REVISIONS

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NO. DATE:

DATE:

CHECK:

DRAWN BY:

PROJECT:

SHEET NO.

DATE: 07/25/18

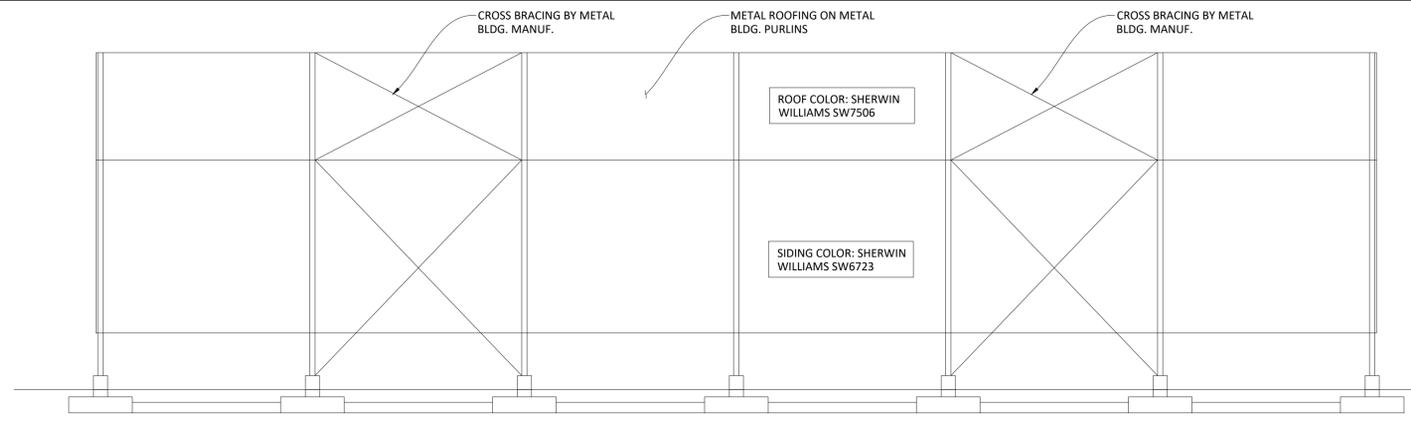
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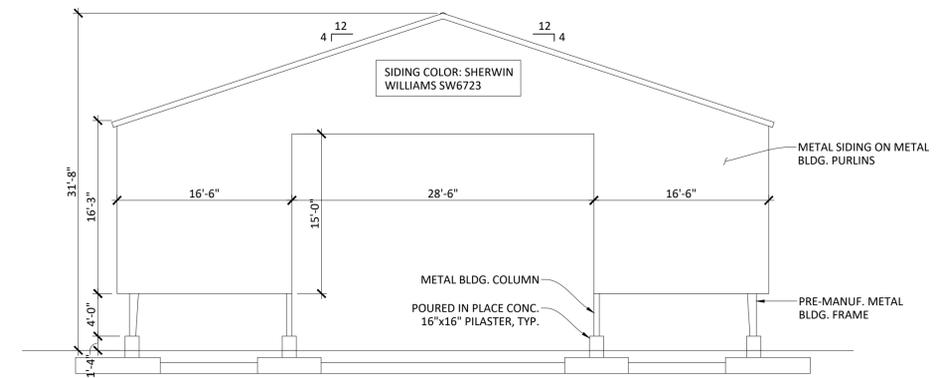
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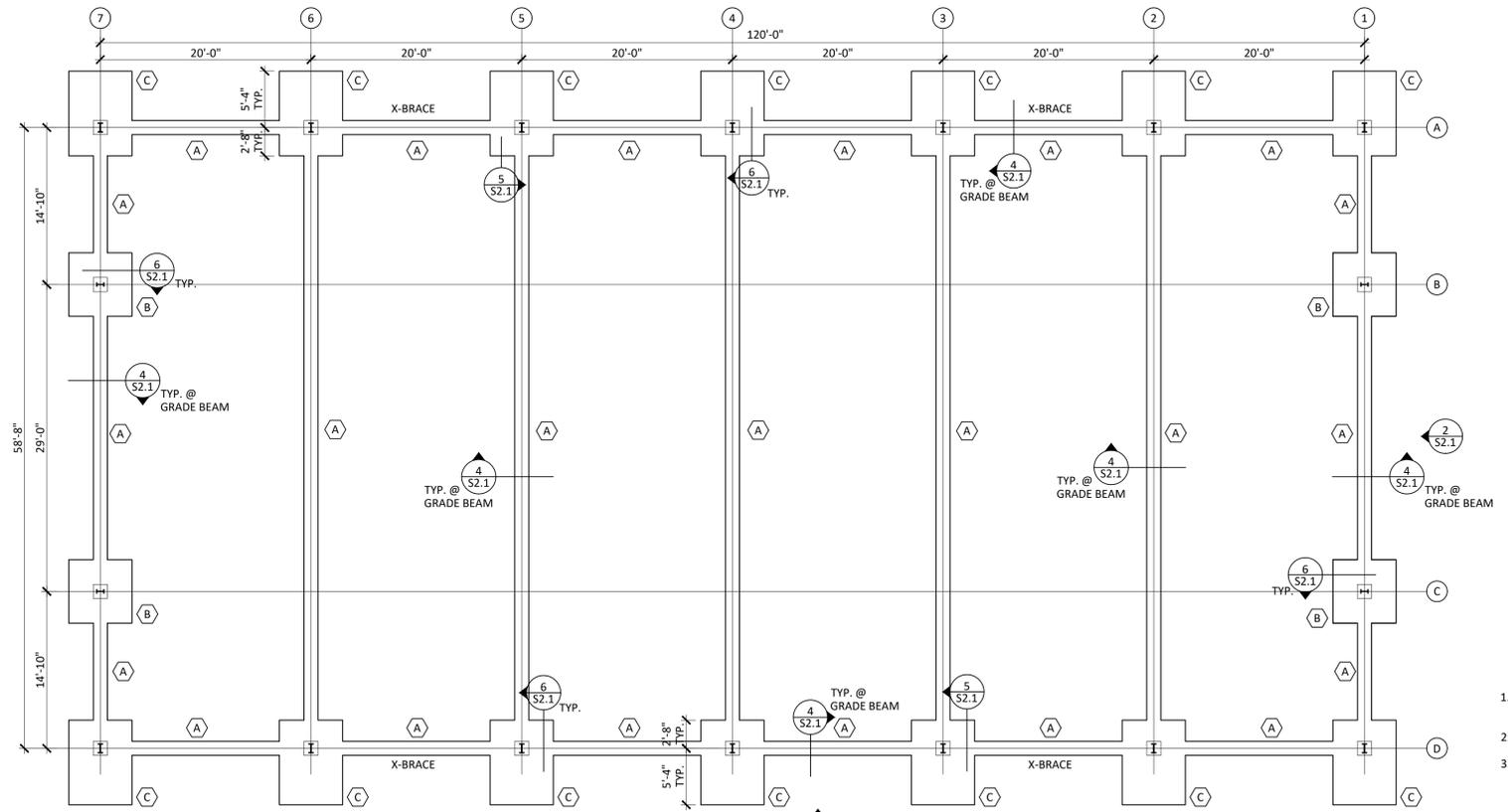
S0.1



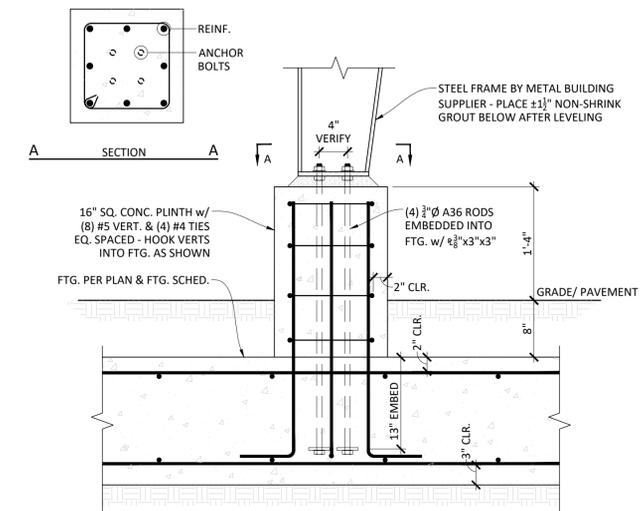
3 SIDE (BOTH) ELEVATION
S2.1 SCALE: 1/8"=1'-0"



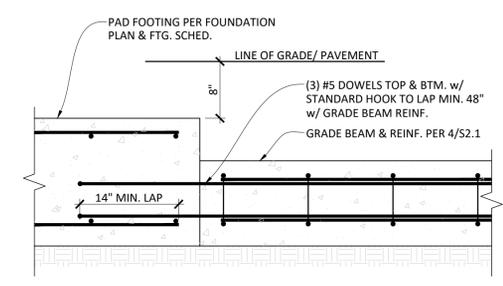
2 FRONT & BACK ELEVATION
S2.1 SCALE: 1/8"=1'-0"



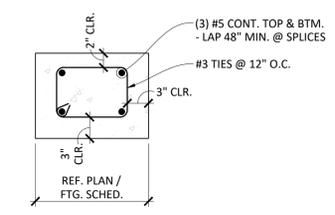
1 FOUNDATION PLAN
S2.1 SCALE: 1/8"=1'-0"



6 CONC. PLINTH / ANCHORAGE DETAIL
S2.1 SCALE: 1"=1'-0"



5 GRADE BEAM TO FOOTING
S2.1 SCALE: 1"=1'-0"

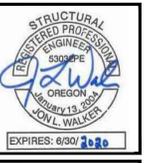


4 GRADE BEAM SECTION
S2.1 SCALE: 1"=1'-0"

PLAN NOTES

- REF. METAL BUILDING DRAWINGS FOR ALL DIMENSIONS NOT SHOWN. CROSS REFERENCE AND VERIFY ALL DIMENSIONS PRIOR TO FOUNDATION POUR.
- INDICATES FOOTING TYPE - REF. SCHEDULE.
- INDICATES COLUMN & BASE PLATE BY METAL BUILDING MANUFACTURER.

FOOTING SCHEDULE			
MARK	SIZE "A" x "B"	"T"	REINFORCING
A	1'-4" x CONT.	12" MIN.	(3) #5 BARS CONT., TOP & BTM. #3 TIES @ 12" O.C.
B	6'-0" x 6'-0"	18" MIN.	(7) #5 EA. WAY, TOP & BTM.
C	6'-0" x 8'-0"	18" MIN.	(11) #5 LONG., TOP & BTM. (8) #5 TRANS., TOP & BTM.



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SHEET NO.
S2.1