



LAND USE PRE-APPLICATION CONFERENCE

Thursday, May 17, 2018

City Hall
22500 Salamo Road

Willamette Conference Room

10:00 am Proposed new front entry door and associated sidewalk

Applicant: Tim Woodley, West Linn/Wilsonville School District

Subject Property Address: 5464 West A Street

Neighborhood Assn: Bolton

Planner: Jennifer Arnold

Project #: PA-18-13





PRE-APPLICATION CONFERENCE

THIS SECTION FOR STAFF COMPLETION

CONFERENCE DATE: <u>5-17-18</u>	TIME: <u>10:00</u>	PROJECT #: <u>PA-18-043</u>
STAFF CONTACT: <u>Jennifer Arnold</u>	FEE: <u>350-</u>	

Pre-application conferences occur on the first and third Thursdays of each month. In order to be scheduled for a conference, this form including property owner's signature, the pre-application fee, and accompanying materials must be submitted at least **15** days in advance of the conference date. Twenty-four hour notice is required to reschedule.

Address of Subject Property (or map/tax lot): 5464 West A Street, West Linn, OR 97068

Brief Description of Proposal: Install new front entry door and associated sidewalk at West Linn High School.

Class 1 DR

Applicant's Name: Tim Woodley: West Linn - Wilsonville School District

Mailing Address: 2755 SW Borland Road, Tualatin, OR 97062

Phone No: (503) 799-6891

Email Address: douglasr@wlwv.k12.or.us

Please attach additional materials relating to your proposal including a site plan on paper up to 11 x 17 inches in size depicting the following items:

- North arrow
- Scale
- Property dimensions
- Streets abutting the property
- Conceptual layout, design and/or building elevations
- Easements (access, utility, all others)
- Access to and from the site, if applicable
- Location of existing trees, highly recommend a tree survey
- Location of creeks and/or wetlands, highly recommend a wetland delineation
- Location of existing utilities (water, sewer, etc.)

Please list any questions or issues that you may have for city staff regarding your proposal:

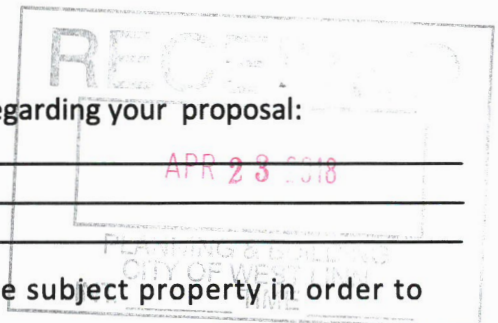
By my signature below, I grant city staff right of entry onto the subject property in order to prepare for the pre-application conference.

Property owner's signature

Date

Tim K. Woodley, Director of Operations

Property owner's printed name and mailing address (if different from above)



WEST LINN HIGH SCHOOL - Small Projects 2018

Project No. 3 Main Entrance Security Revisions

West Linn - Wilsonville School District
5464 West A Street West Linn, Oregon 97068

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technology

T1.01	FLOOR PLAN - TECHNOLOGY
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PROJECT INFORMATION

PROJECT ADDRESS:	5464 WEST A STREET, WEST LINN, OREGON	SQUARE FOOTAGE OF ROOM G101 BEFORE REMODEL:	283 S.F.
OWNER:	WEST LINN / WILSONVILLE SCHOOL DISTRICT	SQUARE FOOTAGE OF ROOM G101 AFTER REMODEL:	283 S.F.
SCOPE OF WORK:	<ul style="list-style-type: none">REMOVE EXTERIOR STOREFRONT AND INSTALL NEW VISITOR ENTRY WITH RAMP, STOREFRONT AND ENTRY DOORSREPLACE EXISTING HOLLOW METAL GLAZING AT RECEPTION AND INSTALL NEW STOREFRONT GLAZING SYSTEM		
CODE REFERENCE:	2014 OREGON STRUCTURAL SPECIALTY CODE WITH OREGON AMENDMENTS		



EXISTING PARTIAL EXTERIOR ELEVATION



PARTIAL EXTERIOR ELEVATION WITH NEW VISITOR ENTRY

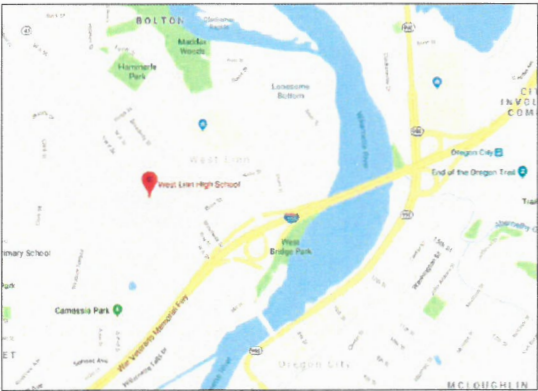
ARCHITECTURAL ABBREVIATIONS

AB	ANCHOR BOLT	EA	EACH	INT	INTERIOR	R	RADIUS	W	WITH
ACT	ACROUSTICAL CEILING TILE	EF	EXHAUST FAN	JAN	JANITOR	RD	ROOF DRAIN	W/O	WITHOUT
ADD	ADDENDUM	EJ	EXPANSION JOINT	JT	JOINT	REF	REFERENCE	WC	WATER CLOSET
AE	ARCHITECTURAL EXPOSED	EL	ELEVATION	JST	JOIST	REFR	REFRIGERATOR	WO	WOOD
AF	ABOVE FINISH FLOOR	ELEC	ELECTRICAL	L	LENGTH	REQD	REQUIRED	WF	WIDE FLANGE
ALS	AREA LIGHT STANDARD	EOS	EDGE OF SLAB	LAV	LAVATORY	REV	REVISION	WG	WIRE GLASS
ALUM	ALUMINUM	ENGR	ENGINEER	LS	LANDSCAPING	RM	ROOM	WH	WATER HEATER
ANOD	ANODIZED	EP	ELECTRICAL PANEL	LVR	LOUVER	RO	ROUGH OPENING	WP	WEATHERPROOFING
BC	BOTTOM OF CURB	EQU	EQUIPMENT	LVR	LOUVER	ROP	REFLECTED CEILING PLAN	WRS	WEATHER-RESISTIVE BARRIER
BD	BOARD	ES	EACH SIDE	LVR	LOUVER	SAM	SELF-ADHERED MEMBRANE	WT	WEIGHT
BLDG	BUILDING	EW	EACH WAY	LVR	LOUVER	SC	SOLID CORE		
BLDG	BLOCKING	EXP	EXPANSION	LVR	LOUVER	SECT	SECTION		
B.M.	BENCH MARK	EXT	EXTERIOR	LVR	LOUVER	SF	SQUARE FOOT		
BM	BEAM	FA	FIRE ALARM	LVR	LOUVER	SHTG	SHOOTING		
BTU	BRITISH THERMAL UNIT	FBO	FURNISHED BY OTHERS	LVR	LOUVER	SHWR	SHOWER		
BTWN	BETWEEN	FDN	FOUNDATION	LVR	LOUVER	SHT	SHEET		
C	CHANNEL	FE	FIRE EXTINGUISHER	LVR	LOUVER	SIM	SIMILAR		
CB	CATCH BASIN	FF	FIRE EXTINGUISHER CABINET	LVR	LOUVER	SJ	SEISMIC JOINT		
CCTV	CLOSED CIRCUIT TV	FF	FINISH FLOOR	LVR	LOUVER	SM	SHEET METAL		
CG	CORNER GUARD	FFE	FINISH FLOOR ELEVATION	LVR	LOUVER	SN	SPECIFICATION		
CLG	CEILING	FL	FLOOR	LVR	LOUVER	SQ	SQUARE		
CLR	CLEAR	FO	FACE OF	LVR	LOUVER	SS	STAINLESS STEEL		
CJ	CONTROL JOINT	FOC	FACE OF CONCRETE	LVR	LOUVER	STD	STANDARD		
CMU	CONCRETE MASONRY UNIT	FOM	FACE OF MASONRY	LVR	LOUVER	STL	STEEL		
CONT	CONTINUOUS	FOS	FACE OF STUD	LVR	LOUVER	STRCT	STRUCTURAL		
CORR	CORROSION	FRT	FIRE RETARDANT TREATED	LVR	LOUVER	SUSP	SUSPENDED		
CJ	CONSTRUCTION JOINT	FTG	FOOTING	LVR	LOUVER	T	TO MATCH		
CSMT	CASEMENT	FUR	FURNISHING	LVR	LOUVER	TC	TEMPERED GLAZING		
CT	CERAMIC TILE	GA	GALVE	LVR	LOUVER	TEL	TELEPHONE		
CTR	CENTER	GB	GRAB BAR	LVR	LOUVER	TG	TONGUE AND GROOVE		
E	END	GC	GENERAL CONTRACTOR	LVR	LOUVER	THK	THICK		
DBL	DOUBLE	GL	GLASS	LVR	LOUVER	THK	THICK		
DTL	DETAIL	GND	GROUND	LVR	LOUVER	TYP	TYPICAL		
DF	DRINKING FOUNTAIN	GWB	GYPSON VENEER PLASTER	LVR	LOUVER	UNFN	UNFINISHED		
DIAM	DIAMETER	H	HOSE BIB	LVR	LOUVER	UNO	UNLESS NOTED OTHERWISE		
DIAG	DIAGONAL	HC	HANDICAP	LVR	LOUVER	VB	VAPOR BARRIER		
DISP	DISPENSER	HDWR	HARDWARE	LVR	LOUVER	VERT	VERTICAL		
DN	DOWN	HM	HOLLOW METAL	LVR	LOUVER	VEST	VESTIBULE		
DP	DAMP PROOFING	HL	HIGH PERFORMANCE COATING	LVR	LOUVER	VFY	VERIFY		
DR	DOOR	HW	HOT WATER	LVR	LOUVER				
DS	DOWN SPOUT	HVAC	HVAC	LVR	LOUVER				
DT	DRAIN TILE			LVR	LOUVER				
DWG	DRAWING			LVR	LOUVER				

ARCHITECTURAL SYMBOLS

NORTH	DRAWING ORIENTATION NORTH	1	GRID LINE
ROOM NAME & NUMBER	DOOR OR WINDOW TYPE	KEYNOTE REFERENCE	CEILING PLANE HEIGHT - ALL REFERENCES TO FINISH FLOOR ELEVATION
INTERIOR FINISH TYPE	HORIZONTAL ELEVATION PLANE HEIGHT - ALL REFERENCES TO F.F.E.	SPOT ELEVATION - ALL REFERENCES TO F.F.E.	WALL TYPE WITH RATING WHERE APPLICABLE
DOOR NUMBER - SEE DOOR SCHEDULE	RELITE NUMBER - SEE RELITE SCHEDULE		

VICINITY MAP



CD SET

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Portland, OR 97204
t: (503) 227-3251 f: (503) 227-7980

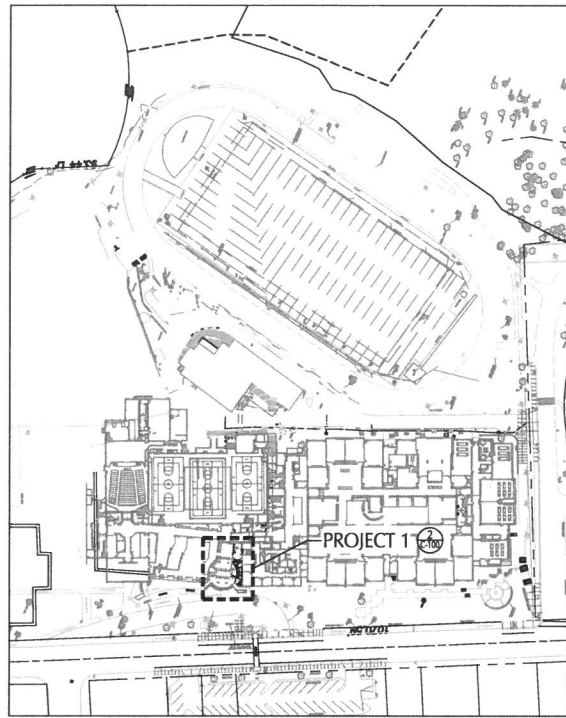
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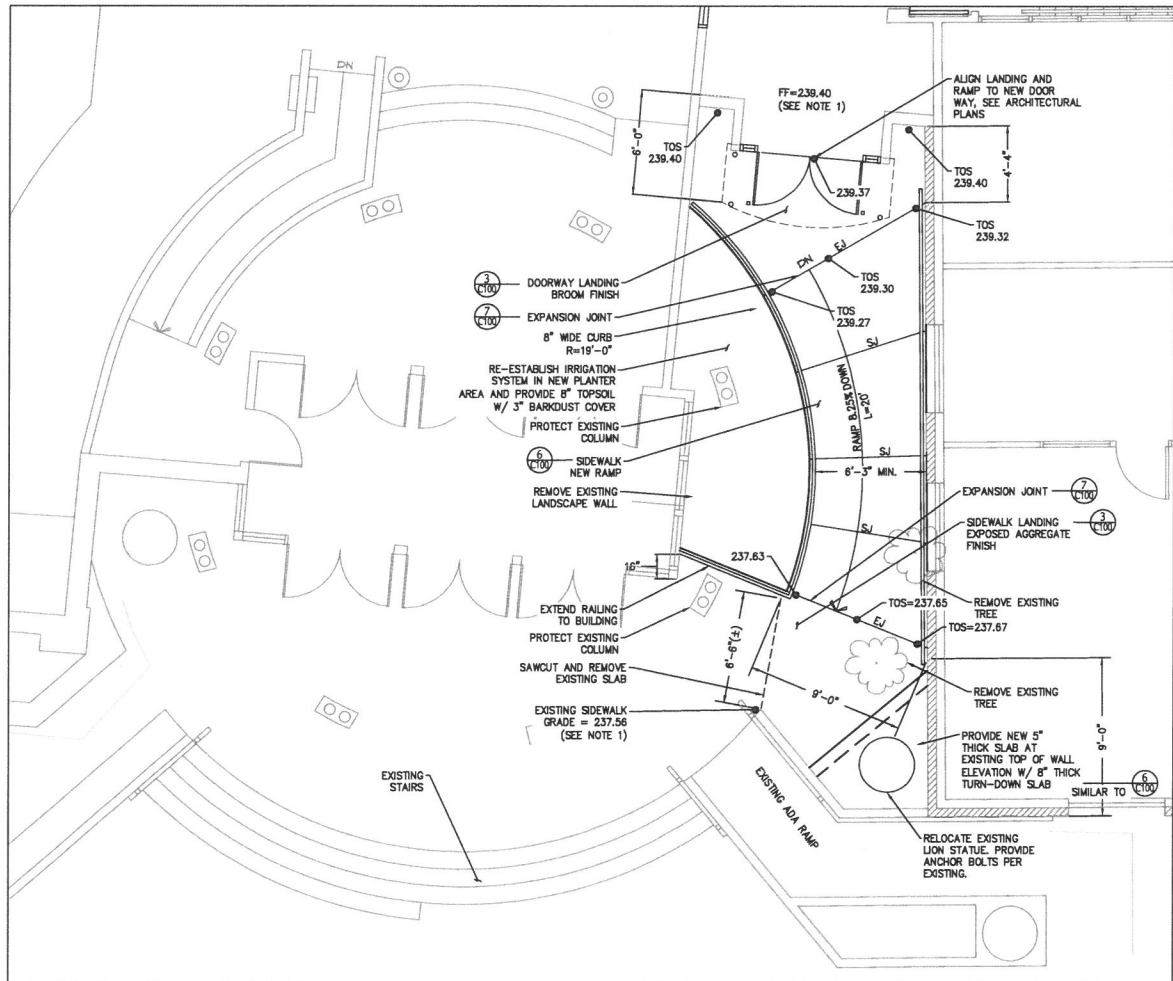
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Portland, OR 97204
t: (503) 382-2266 f: (503) 382-2262



WEST LINN HIGH SCHOOL
Project No. 3 Main Entrance Security Revisions
CD Set
April 12 2018
project # 115978



1 GENERAL ARRANGEMENT
SCALE: 1" = 100'



NOTE 1: CONTRACTOR TO CONFIRM EXISTING ELEVATIONS PRIOR TO CONSTRUCTION.

2 ENLARGED SITE PLAN
SCALE: 1/2" = 1'-0"

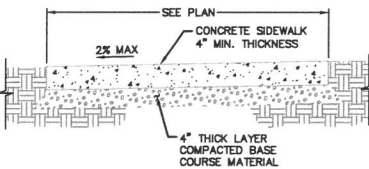
GENERAL NOTES

SECTION 02315 - EARTHWORK

- MOVEMENT OF CONSTRUCTION MACHINERY AND EQUIPMENT OVER PIPE AND UTILITIES DURING CONSTRUCTION SHALL BE AT THE CONTRACTOR'S RISK. PERFORM ALL WORK ADJACENT TO PRIVATELY OWNED UTILITIES IN ACCORDANCE WITH PROCEDURES OUTLINED BY UTILITY COMPANY. FOR WORK IMMEDIATELY ADJACENT TO OR FOR EXCAVATIONS EXPOSING A UTILITY OR OTHER BURIED OBSTRUCTION, USE HAND OR LIGHT EQUIPMENT EXCAVATION. SUPPORT UNCOVERED LINES OR OTHER EXISTING WORK AS AFFECTED BY THE CONTRACT EXCAVATION.
- PROTECT NEWLY GRADED AREAS FROM TRAFFIC, EROSION, AND SETTLEMENTS. REPAIR AND RE-ESTABLISH DAMAGED OR ERODED SLOPES, ELEVATIONS, OR GRADES AND RESTORE SURFACE CONSTRUCTION PRIOR TO ACCEPTANCE. PROTECT EXISTING STREAMS, DITCHES, AND STORM DRAIN INLETS FROM WATER-BORNE SOLID BY MEANS OF STRAW BALE DIKES AND/OR FILTER FABRIC DAMS AS INDICATED.
- AGGREGATE BASE COURSE MATERIAL
 - BASE COURSE MATERIAL: 3/4" MINUS WEL GRADED CRUSHED ROCK WITH LESS THAN 5% OF FINES PASSING THROUGH A #200 SIEVE.
- TOPSOIL MATERIAL
 - PROVIDE IMPORTED TOPSOIL MATERIAL CONSISTING OF FRABLE, FERTILE SOIL OF LOAMY CHARACTER, CONTAINING AN AMOUNT OF ORGANIC MATTER NORMAL TO THE REGION, CAPABLE OF SUSTAINING HEALTH PLANT LIFE, AND REASONABLY FREE FROM SUBSOIL, ROOTS, HEAVY OR STIFF CLAY, STONES LARGER THAN 2" IN GREATEST DIMENSION, NOXIOUS WEEDS, STICKS, BRUSH, LITTER, AND OTHER DELETERIOUS MATTER.
- THE CONSTRUCTION DOCUMENTS MAKE NO REPRESENTATION OR WARRANTIES OF SOIL QUANTITIES. CONTRACTOR IS RESPONSIBLE FOR DETERMINING ALL QUANTITIES OF MATERIALS NECESSARY TO COMPLETE THE PROJECT.
- ALL NECESSARY IMPORTED SOIL MATERIALS AS SHOWN IN THE DESIGN DOCUMENTS SHALL BE SUPPLIED BY THE CONTRACTOR. EXCESS ON-SITE EXCAVATED MATERIAL STOCKPILED AND NOT USED ELSEWHERE ON THE PROJECT SHALL BE REMOVED FROM THE SITE AT THE END OF THE PROJECT AT THE CONTRACTOR'S EXPENSE.
- ALL TOPSOIL AND ORGANIC BEARING MATERIAL, INCLUDING FILL, SHALL BE STRIPPED AND WASTED OFF SITE. IF ORGANIC SOILS ARE FOUND AFTER THE STRIPPING OPERATION, LOCALIZED AREAS CONTAINING THESE MATERIALS SHALL BE OVER-EXCAVATED AND BACKFILLED WITH ENGINEERED STRUCTURAL FILL.
- GROUNDWATER FLOWING TOWARD OR INTO EXCAVATIONS SHALL BE CONTROLLED TO PREVENT SLOUGHING OR EXCAVATION SLOPES AND WALLS, BOILS, UPLIFT AND HEAVE IN THE EXCAVATION AND TO ELIMINATE INTERFERENCE WITH ORDERLY PROGRESS OF CONSTRUCTION. FRENCH DRAINS, SUMPS, DITCHES OR TRENCHES WILL NOT BE PERMITTED WITHIN 3' OF THE FOUNDATION OF ANY STRUCTURE.
- EXCAVATE FOR SLABS, AND OTHER IMPROVEMENTS TO SIZES AND LEVELS SHOWN OR REQUIRED. ALLOW FOR FORM CLEARANCE AND FOR PROPER COMPACTION OF REQUIRED BACKFILLING MATERIAL. ALL FOOTINGS BASES TO BEAR ON FIRM, NATURAL, UNDISTURBED SOIL FREE OF ORGANIC MATERIAL OR ON ENGINEERED FILL.
- ALL SOFT, WET SOIL, OR SOIL OF UNUSUAL CONDITION SHALL BE EXCAVATED TO FIRM, NATURAL, UNDISTURBED SOIL, AND BACKFILLED WITH SPECIFIED FILL MATERIALS. BACKFILL AND COMPACT ALL OVER-EXCAVATED AREAS AS SPECIFIED FOR FILL BELOW AT NO ADDITIONAL COST TO THE OWNER.
- GENERAL BACKFILL BESIDE STRUCTURES SHALL BE PLACED IN LAYERS NOT TO EXCEED 8" IN THICKNESS AND COMPACTED TO 92 PERCENT OF ITS MAXIMUM MODIFIED PROCTOR (ASTM D 1557) DRY DENSITY. WATER CONTENT AT THE TIME OF CONNECTION SHALL BE WITHIN ± 3 PERCENT OF OPTIMUM.
- BASE COURSE MATERIALS FOR PAVING AREAS SHALL BE COMPACTED TO 95 PERCENT OF THE MODIFIED PROCTOR DRY DENSITY (ASTM D1557).

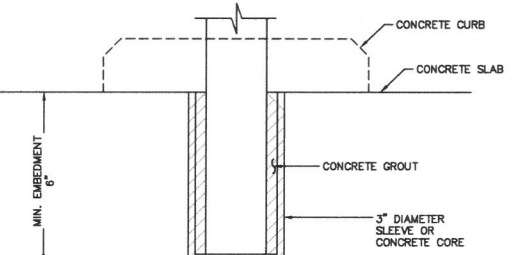
SECTION 02750 - SITE CONCRETE

- CONCRETE MATERIALS
 - PORTLAND CEMENT: ASTM C 150, TYPE I. USE ONE BRAND OF CEMENT THROUGHOUT PROJECT UNLESS OTHERWISE APPROVED IN WRITING BY OWNER'S REPRESENTATIVE.
 - FLY ASH: ASTM C 618, TYPE F.
 - NORMAL-WEIGHT AGGREGATES: ASTM C 33, CLASS 4, AND AS FOLLOWS. PROVIDE AGGREGATES FROM A SINGLE SOURCE. MAXIMUM AGGREGATE SIZE: 3/4" INCH. DO NOT USE FINE OR COARSE AGGREGATES THAT CONTAIN SUBSTANCES THAT CAUSE SPALLING.
 - WATER: POTABLE.
 - AIR-ENTRAINING ADMIXTURE: ASTM C 260, CERTIFIED BY MANUFACTURER TO BE COMPATIBLE WITH OTHER REQUIRED ADMIXTURES.
 - WATER-REDUCING ADMIXTURE: ASTM C 494, TYPE A.
- CONCRETE MIX
 - PREPARE DESIGN MIXES FOR EACH TYPE AND STRENGTH OF NORMAL-WEIGHT CONCRETE BY EITHER LABORATORY TRIAL BATCH OR FIELD EXPERIENCE METHODS AS SPECIFIED IN ACI 301. PROPORTION MIXES ACCORDING TO ACI 211.1 AND ACI 301 TO PROVIDE NORMAL-WEIGHT CONCRETE WITH THE FOLLOWING PROPERTIES:
 - COMPRESSIVE STRENGTH (28-DAY): 3,500 PSI UNLESS OTHERWISE NOTED.
 - MAXIMUM AGGREGATE SIZE: 3/4" INCH.
 - MAXIMUM SLUMP: 4 INCHES PLUS 1/2" TO 1 INCH.
 - ENTRAINED AIR: 5 PERCENT \pm 1 PERCENT.

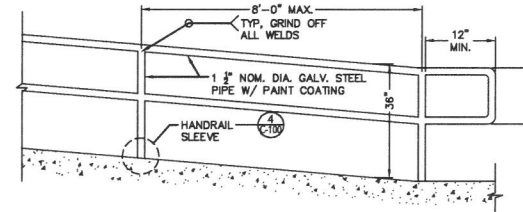


- NOTES:
- CONSTRUCT CONTRACTION JOINTS AT 5' MAX. SPACING AND AT RAMPS. CONSTRUCT EXPANSION JOINTS AT 20' MAX SPACING, AT POINTS OF TANGENCY AND AT ENDS OF EACH DRIVEWAY, UNLESS NOTED OTHERWISE.

3 SIDEWALK LANDING
SCALE: NTS



4 HANDRAIL SLEEVE
SCALE: NTS



5 RAMP AND HANDRAIL
SCALE: NTS

GENERAL NOTES

- ELEVATIONS ARE BASED ON A FINISHED FLOOR ELEVATION OF 238.40 FEET AS SHOWN ON PLANS FOR WEST LINN HIGH SCHOOL DATED 03/15/2018.
- PROJECT CONTROL SHALL BE FIELD VERIFIED AND CHECKED FOR RELATIVE HORIZONTAL POSITION PRIOR TO BEGINNING CONSTRUCTION LAYOUT.
- CONTRACTOR SHALL PRESERVE AND PROTECT FROM DAMAGE ALL EXISTING MONUMENTATION DURING CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING AND PAYING FOR THE REPLACEMENT OF ANY MONUMENTS DAMAGED OR REMOVED DURING CONSTRUCTION. NEW MONUMENTS SHALL BE REESTABLISHED BY A LICENSED SURVEYOR.
- SOME SITE DEMOLITION AND UTILITY RELOCATION HAS BEEN PERFORMED. SURVEY MAY NOT BE COMPLETE OR ACCURATE. CONTRACTOR TO VERIFY EXISTING SITE CONDITIONS PRIOR TO CONSTRUCTION. CONTRACTOR SHALL BRING ANY DISCREPANCIES TO THE ATTENTION OF THE ENGINEER PRIOR TO BEGINNING CONSTRUCTION.
- ALL CONSTRUCTION AND MATERIALS SHALL CONFORM TO THESE PLANS, THE PROJECT SPECIFICATIONS AND THE APPLICABLE REQUIREMENTS OF THE 2015 OREGON STANDARD SPECIFICATIONS FOR CONSTRUCTION, AND REQUIREMENTS OF THE CITY OF WEST LINN.
- ATTENTION: OREGON LAW REQUIRES YOU TO FOLLOW RULES ADOPTED BY THE OREGON UTILITY NOTIFICATION CENTER. THOSE RULES ARE SET FORTH IN OAR 952-001-0010 THROUGH OAR 952-001-0090. YOU MAY OBTAIN COPIES OF THE RULES BY CALLING THE CENTER. (NOTE: THE TELEPHONE NUMBER FOR THE OREGON UTILITY NOTIFICATION CENTER IS (503) 232-1987). EXCAVATORS MUST NOTIFY ALL PERTINENT COMPANIES OR AGENCIES WITH UNDERGROUND UTILITIES IN THE PROJECT AREA AT LEAST 48 BUSINESS-DAY HOURS, BUT NOT MORE THAN 10 BUSINESS DAYS PRIOR TO COMMENCING AN EXCAVATION, SO UTILITIES MAY BE ACCURATELY LOCATED.
- THE LOCATION OF EXISTING UNDERGROUND UTILITIES SHOWN ON THE PLANS ARE FOR INFORMATION ONLY AND ARE NOT GUARANTEED TO BE COMPLETE OR ACCURATE. CONTRACTOR SHALL VERIFY ELEVATIONS, PIPE SIZE, AND MATERIAL TYPES OF ALL UNDERGROUND UTILITIES PRIOR TO COMMENCING WITH CONSTRUCTION AND SHALL BRING ANY DISCREPANCIES TO THE ATTENTION OF KPFF CONSULTING ENGINEERS, 72 HOURS PRIOR TO START OF CONSTRUCTION TO PREVENT GRADE AND ALIGNMENT CONFLICTS.
- THE ENGINEER OR OWNER IS NOT RESPONSIBLE FOR THE SAFETY OF THE CONTRACTOR OR HIS CREW. ALL O.S.H.A. REGULATIONS SHALL BE STRICTLY ADHERED TO IN THE PERFORMANCE OF THE WORK.
- TEMPORARY AND PERMANENT EROSION CONTROL MEASURES SHALL BE IMPLEMENTED. THE CONTRACTOR SHALL ADHERE TO CITY OF WEST LINN FOR MINIMUM EROSION CONTROL MEASURES. THE ESC FACILITIES SHOWN IN THESE PLANS ARE THE MINIMUM REQUIREMENTS FOR ANTICIPATED SITE CONDITIONS. DURING THE CONSTRUCTION PERIOD, ESC FACILITIES SHALL BE UPGRADED AS NEEDED FOR UNEXPECTED STORM EVENTS AND TO ENSURE THAT SEDIMENT AND SEDIMENT LOADED WATER DO NOT LEAVE THE SITE.
- THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING ALL ROADWAYS, KEEPING THEM CLEAN AND FREE OF CONSTRUCTION MATERIALS AND DEBRIS, AND PROVIDING DUST CONTROL AS REQUIRED.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING AND SCHEDULING ALL WORK WITH THE OWNER.

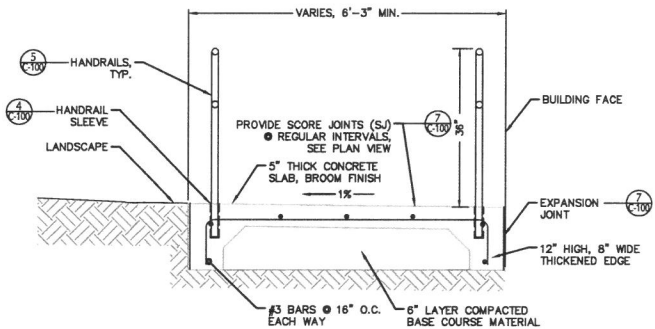
CONSTRUCTION NOTES

DEMOLITION

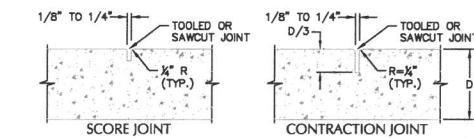
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR DEMOLITION AND DISPOSAL OF EXISTING AC, CURBS, SIDEWALKS AND OTHER SITE ELEMENTS WITHIN THE SITE AREA IDENTIFIED IN THE PLANS.
- EXCEPT FOR MATERIALS INDICATED TO BE STOCKPILED OR TO REMAIN ON OWNER'S PROPERTY, CLEARED MATERIALS SHALL BECOME CONTRACTOR'S PROPERTY, REMOVED FROM THE SITE, AND DISPOSED OF PROPERLY.
- ITEMS INDICATED TO BE SALVAGED SHALL BE CAREFULLY REMOVED AND DELIVERED STORED AT THE PROJECT SITE AS DIRECTED BY THE OWNER.
- ALL LANDSCAPING, PAVEMENT, CURBS AND SIDEWALKS, BEYOND THE IDENTIFIED SITE AREA, DAMAGED DURING THE CONSTRUCTION SHALL BE REPLACED TO THEIR ORIGINAL CONDITION OR BETTER.
- CONCRETE SIDEWALKS SHOWN FOR DEMOLITION SHALL BE REMOVED TO THE NEAREST EXISTING CONSTRUCTION JOINT.
- SAW CUT STRAIGHT MATCHLINES TO CREATE A BUTT JOINT BETWEEN THE EXISTING AND NEW PAVEMENT.

UTILITIES

- ADJUST ALL INCIDENTAL STRUCTURES, MANHOLES, VALVE BOXES, CATCH BASINS, FRAMES AND COVERS, ETC. TO FINISHED GRADE.
- CONTRACTOR SHALL ADJUST ALL EXISTING AND/OR NEW FLEXIBLE UTILITIES (WATER, TV, TELEPHONE, ELEC, ETC.) TO CLEAR ANY EXISTING OR NEW GRAVITY DRAIN UTILITIES (STORM DRAIN, SANITARY SEWER, ETC.) IF CONFLICT OCCURS.



6 SIDEWALK RAMP
SCALE: NTS



JOINT INTERVALS TABLE		
TYPE	SPACING	OR AT...
SCORE	5' TYP.	LOCATIONS SHOWN ON PLANS
CONTRACTION	15' MAX.	END OF RAMPS AND DRIVEWAYS
EXPANSION / ISOLATION	200' *	POINTS OF TANGENCY AND AT ENDS OF EACH DRIVEWAY OR OTHER FIXED OBJECTS

* MONOLITHIC CURB AND SIDEWALK SHALL BE 45' MAX.

- NOTES:
- CONTRACTION JOINTS MAY BE USED IN PLACE OF SCORE JOINTS.
 - CONSTRUCTION COLD JOINTS MAY BE USED IN PLACE OF CONTRACTION JOINTS.
 - PROVIDE MEDIUM BROOM FINISH WITH NO TOOL MARKS.

7 SIDEWALK JOINTS
SCALE: NTS



Duff Olson Weekes - IBI Group
Architects, Inc.

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WEST LINN HS SMALL PROJECTS 2018
PROJECT NO. 3 ROOM C140 REMODEL
West Linn - Wilsonville School District 3J
2755 SW Borland Road
West Linn, OR 97062
t: (503) 673-7000



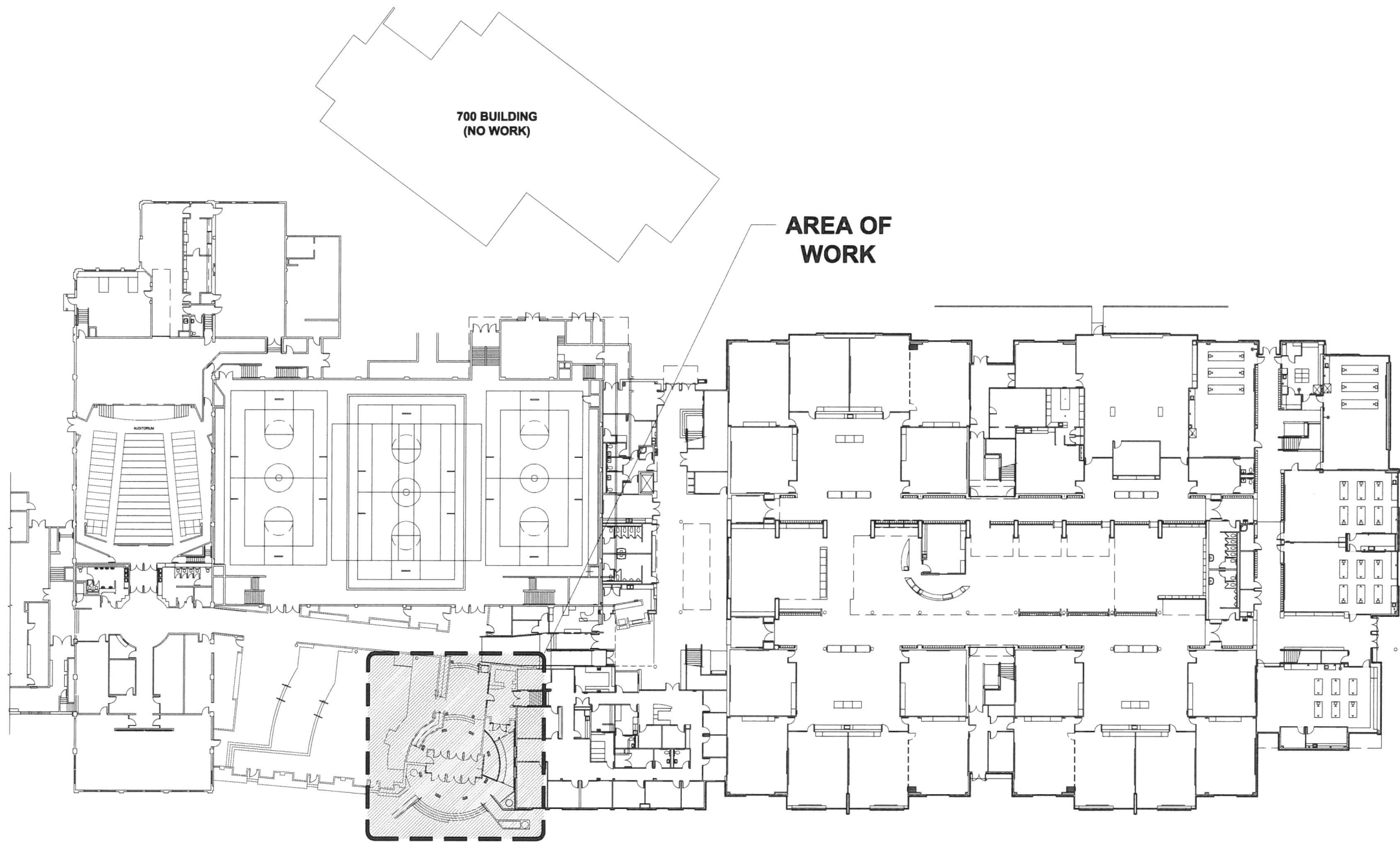
key plan	
phase	cd
date	04/18/2018
project #	115978

CIVIL PLAN & DETAILS

C-100



key plan	
phase	cd
date	4/12/18
project #	15013
OVERALL PLAN	
A1.01	



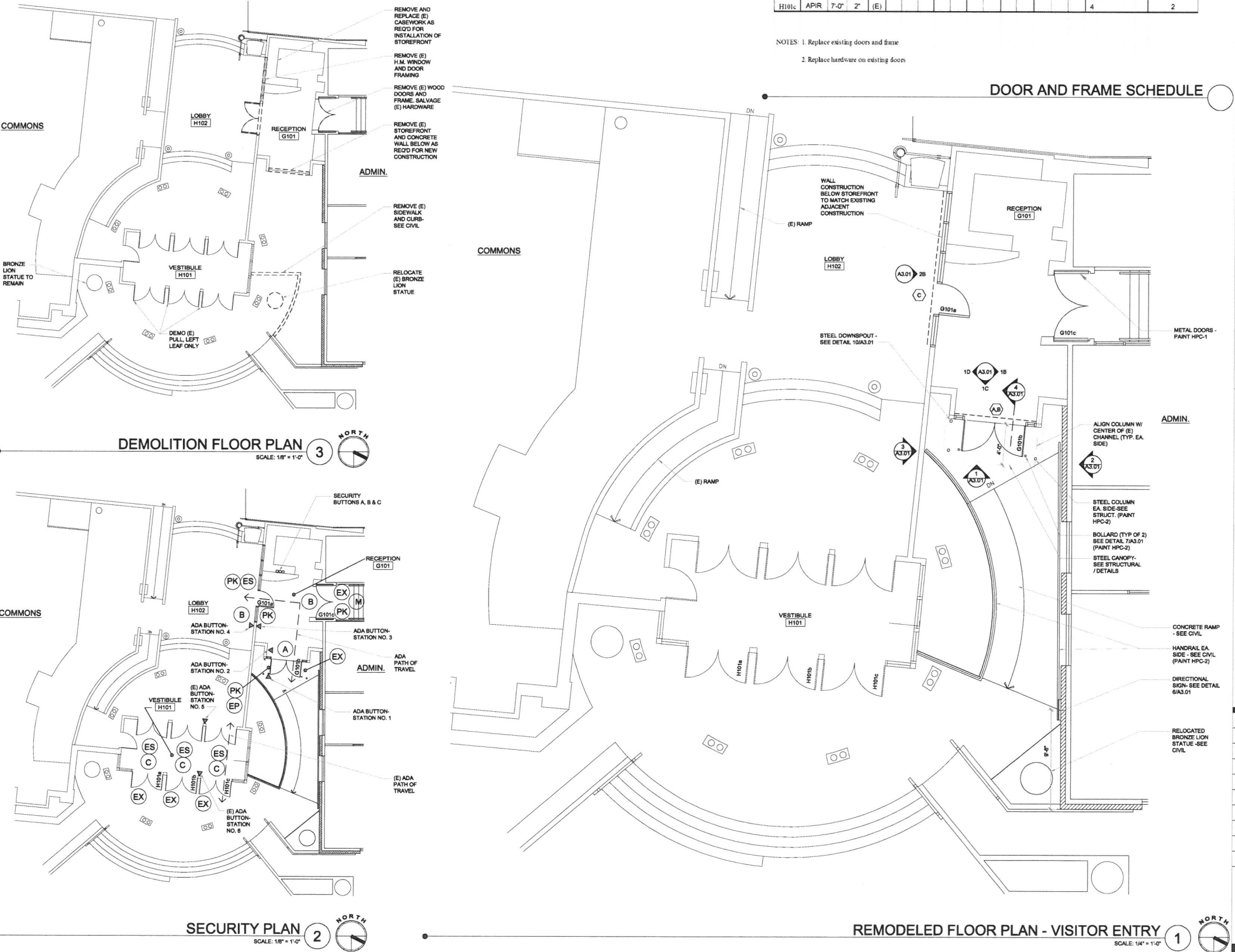
OVERALL PLAN
SCALE: 1"=20'-0"



SECURITY PLAN NOTES:		DEMOLITION PLAN NOTES:		FLOOR PLAN LEGEND:	
(M) - MAG HOLD	(EX) - EXIT ONLY / BLANK PLATE	A. DEMOLITION DRAWINGS ARE DIAGRAMMATIC AND ARE TO ASSIST THE CONTRACTOR IN ESTABLISHING THE GENERAL SCOPE OF WORK. PROVIDE ALL DEMOLITION REQUIRED TO COMPLETE THE WORK AS INDICATED ON THE NEW CONSTRUCTION DRAWINGS AND AS SPECIFIED.		_____ EXISTING TO REMAIN	
(PK) - PULL W/ KEY	(P) - 1 PULL	B. NOTATIONS FOR SAW CUTTING CONCRETE SLABS ARE APPROXIMATE - VERIFY WITH STRUCTURAL AND CIVIL DRAWINGS AND WITH FIELD CONDITIONS. PATCH AND POUR BACK ANY SAW CUT CONCRETE FOR TRENCHES OR ANY HOLES FROM DEMOLISHED WALLS, CONDUIT OR PLUMBING WITH NEW CONCRETE TO MATCH EXISTING. SEE STRUCTURAL FOR POUR BACK DETAIL INFORMATION.		----- SECURITY GLAZING TO +7'-0" AFF	
(CD) - CYLINDER DOGGING	(K) - KEY, NO PULL	C. WHERE DEMOLITION OR REMOVAL OF AN ITEM OCCURS, PATCH REMAINING WALLS, FLOORS AND CEILING TO MATCH EXISTING ADJACENT MATERIAL, COLOR AND FINISH, UNLESS OTHERWISE NOTED.			
(A) - SECURITY BUTTON A	(ES) - ELECTRONIC STRIKE	D. REMOVE MATERIALS TO BE REINSTALLED OR RETAINED IN A MANNER TO PREVENT DAMAGE, STORE AND PROTECT.			
(B) - SECURITY BUTTON B	(EP) - ELECTRONIC PANIC	E. PRIOR TO SAWCUTTING ANY EXISTING CONCRETE FLOOR SLAB, PROVIDE FIELD ENGINEERING AND UTILITIES LOCATION SERVICES TO LOCATE ANY EXISTING ELECTRICAL, TELEPHONE, WATER, SANITARY SEWER OR STORM DRAIN LINES WITHIN THE AREA OF WORK.			
(C) - SECURITY BUTTON C		F. THE TERM "DEMO" INDICATES THAT THE ITEM BECOMES THE PROPERTY OF THE GENERAL CONTRACTOR FOR DISPOSAL.			
SECURITY BUTTONS - LOC. AT RECEPTION:		G. FOR ITEMS IN WORK AREAS NOT DESIGNATED EITHER "TO REMAIN" OR "BE REINSTALLED" ARE TO BE SALVAGED AND TURNED OVER TO THE OWNER.			
BUTTON	FUNCTION	H. CAP WIRING AT ANY OUTLETS TO BE REMOVED.			
SECURITY BUTTON A	RELEASE OF DOOR G101b				
SECURITY BUTTON B	RELEASE OF DOOR G101a & AG101c				
SECURITY BUTTON C	RELEASE OF DOOR H101a, H101b & H101c				

DOOR & FRAME SCHEDULE																
				DOOR						FRAME			HARDWARE		REMARKS	
NO	SIZE		TYPE	MATERIAL	FINISH	MATERIAL	FINISH	GLASS								
	WIDTH	HEIGHT	THICKNESS (VERIFY)	RELOCATED (R) OR NEW (N)	ALUMINUM	WOOD	HOLLOW METAL	PAINT	MANUFACTURER FINISH	HOLLOW METAL	ALUMINUM	PAINT	MANUFACTURER FINISH	IT-1	IT-2	LT-1
G101a	3'-0"	8'-0"	2"	N	X				X	X	X	X		X	1	
G101b	3'-0"	7'-0"	2"	N	X				X	X	X	X	X		2	1
G101c	3'-0"	7'-0"	2"	N		X	X		X	X					3	
H101a	3'-0"	7'-0"	2"	(E)											4	2
H101b	3'-0"	7'-0"	2"	(E)											4	2
H101c	3'-0"	7'-0"	2"	(E)											4	2

NOTES: 1. Replace existing doors and frame
2. Replace hardware on existing doors

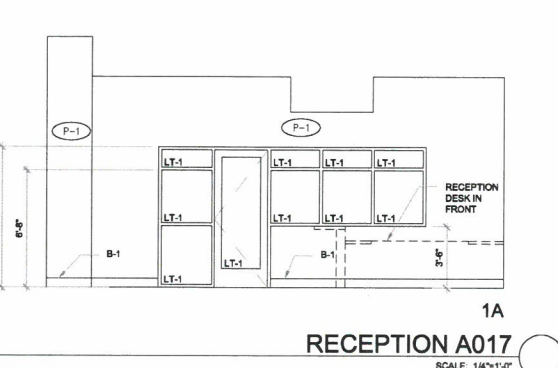
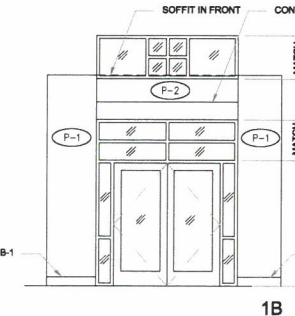
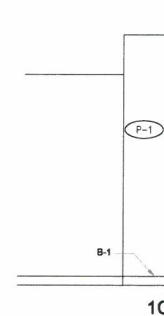
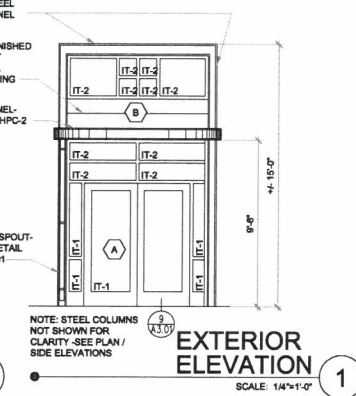
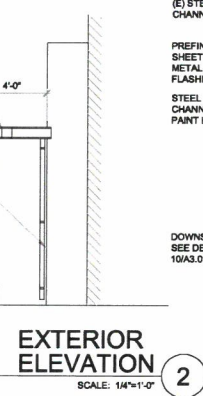
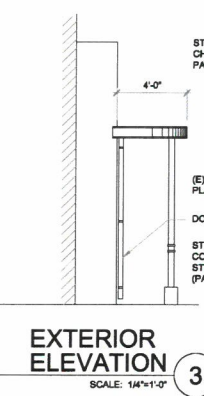
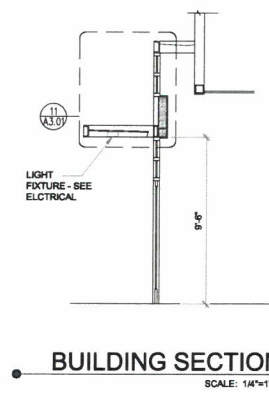
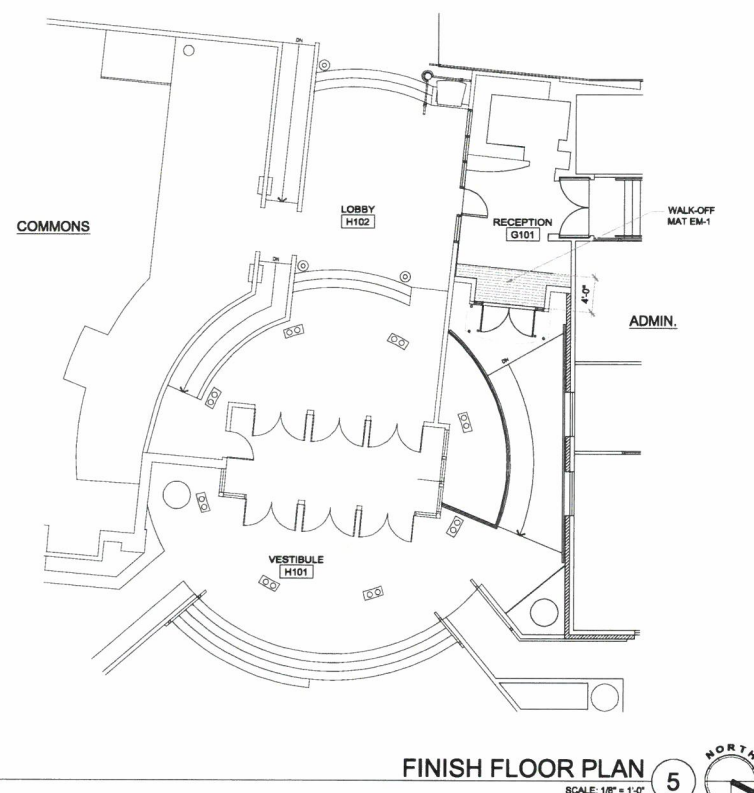
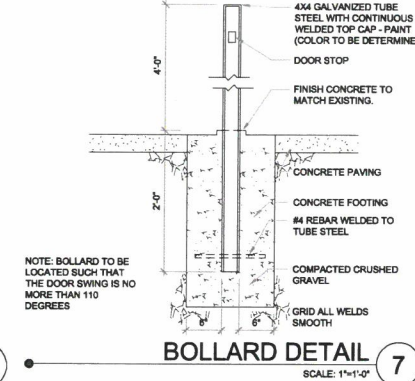
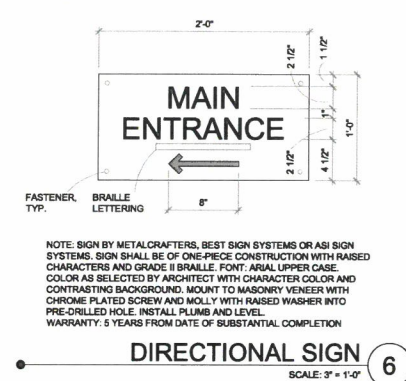
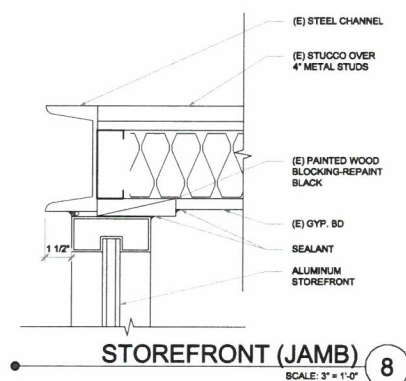
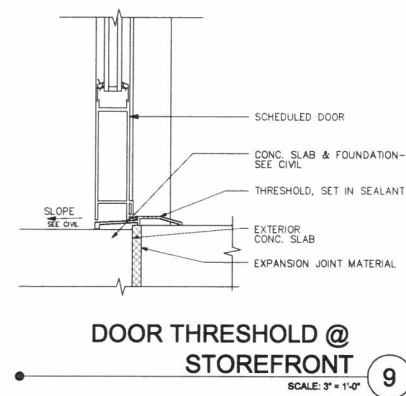
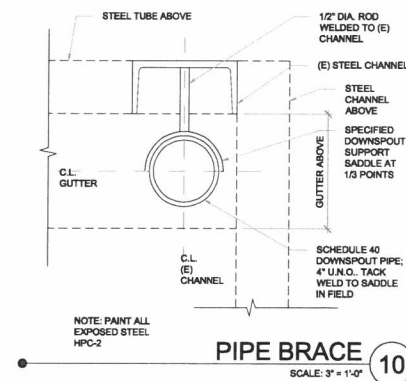
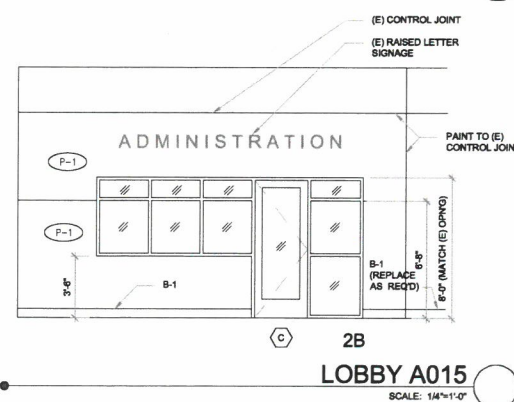
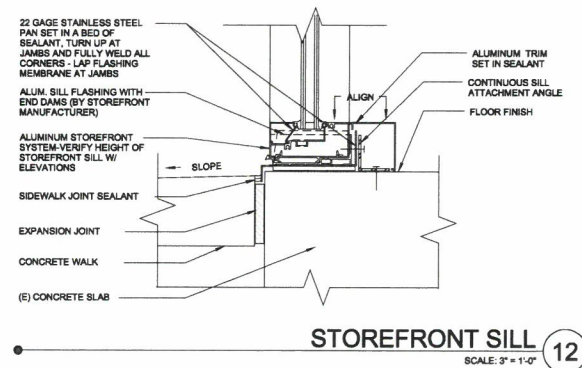
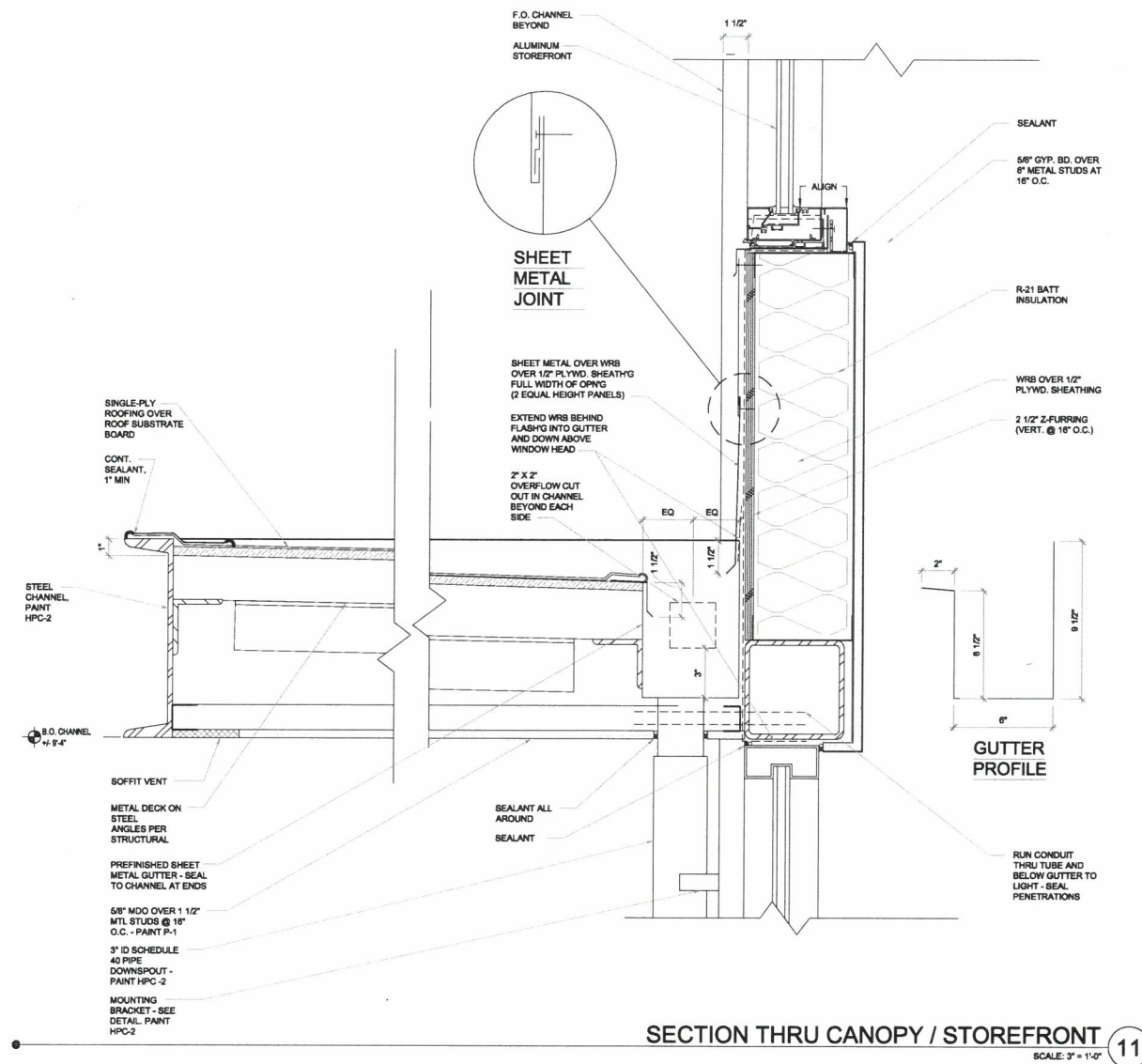


WEST LINN HS SMALL PROJECTS 2018
MAIN ENTRANCE SECURITY REVISIONS
West Linn - Wilsonville School District 3J
2755 SW Bolland Road
West Linn, OR 97062
t: (503) 673-7000

REGISTERED ARCHITECT
JAMES M. FITZPATRICK
4345
PORTLAND, OREGON 97205
STATE OF OREGON

key plan

phase	cd
date	4/12/18
project #	15013
FLOOR PLAN	
A2.01	



SECTION 05 50 00 METAL FABRICATIONS		
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1.01 SECTION INCLUDES		
A. Shop fabricated and manufactured steel including, but not limited to, the following:		
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2. Pipe downspouts.		
3. Handrails for exterior ramps.		
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B. Section 05 12 00 - Structural Steel Framing: Structural steel column anchor bolts and related structural steel elements.		
C. Section 09 98 00 - High Performance Coating: Coating finish and metal primers for use for shop primers.		
1.03 REFERENCE STANDARDS		
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B. ASTM A123/A123M - Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products		
C. ASTM A500/A500M - Standard Specification for Cold-Formed Welded and Seamless Carbon Steel Structural Tubing in Rounds and Shapes		
D. ASTM A780/A780M - Standard Practice for Repair of Damaged and Uncoated Areas of Hot-Dip Galvanized Coatings		
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1. Shop Drawings: Indicate profiles, sizes, connection attachments, reinforcing, anchorage, size and type of fasteners, and accessories. Include erection drawings, elevations, and details where applicable.		
2. Prepare shop drawings from field measurements where possible.		
3. Indicate welded connections using standard AWS A2.4 welding symbol. Indicate net weld lengths.		
C. Paint Certification: Certifications from manufacturers of bolsters applied over shop primers certifying that shop primers are compatible with topcoats.		
D. Welder Certificate: Submit certification to welders employed on the project, verifying AWS qualification within the previous 12 months.		
1.05 PERFORMANCE REQUIREMENTS		
A. Thermal Movement: Allow for thermal movement from ambient and surface temperature changes acting on exterior metal fabrication by providing buckling, opening of joints, compressing of components, release of connections, and other detrimental effects.		
1. Temperature Change: 120 deg F, mean; 180 deg F, mean; surfaces.		
1.06 QUALITY ASSURANCE		
A. Welding Qualifications: Qualify procedures and personnel according to the following:		
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2. AWS D1.2/D1.2M, "Structural Welding Code - Aluminum"		
1.07 DELIVERY, STORAGE AND PROTECTION		
A. Transport, handle, store and protect products with special custom wrapping and handling procedures to protect and touch-up shop primers at every stage of shipping.		
Project No. 15013 April 2018 Section 05 50 00	West Linn - Wilsonville School District West Linn HS Small Projects No. 3	05 50 00 - 1

SECTION 07 54 00 THERMOPLASTIC MEMBRANE ROOFING		
SECTION 07 54 00 THERMOPLASTIC MEMBRANE ROOFING		
1.01 SECTION INCLUDES		
A. Mechanically attached system with thermoplastic roofing membrane.		
B. Vapor barrier.		
C. Cover board.		
D. Substrate board.		
E. Flashings.		
F. Prefabricated membrane flashing materials.		
1.02 RELATED REQUIREMENTS		
A. Section 07 62 00 - Sheet Metal Flashing and Trim: Counterflashings, reglets and similar flashings.		
1.03 REFERENCE STANDARDS		
A. ANSI/SPRI ES-1 - Wind Design Standard for Edge Systems Used with Low Slope Roofing Systems		
B. ANSI/SPRI FS-1 - American National Standard - Standard Field Test Procedure for Determining the Withstand Resistance of Roofing Fasteners		
C. ANSI/SPRI IS-1 - Standard Field Test Procedure for Determining the Mechanical Uplift Resistance of Insulation Adhesives over Various Substrates		
D. ASCE 7 - Minimum Design Loads for Buildings and Other Structures		
E. ASTM C117/C117M - Standard Specification for Glass Mat Gypsum Substrate for Use as Sheathing		
F. ASTM C1269 - Standard Specification for Field Rigid Cellular Polyisocyanurate Thermal Insulation Board		
G. ASTM D4343/D4343M - Standard Specification for Poly(Vinyl Chloride) Sheet Roofing		
H. NRCA ML104 - The NRCA Roofing and Waterproofing Manual: National Roofing Contractors Association		
I. SOQAQD 1168 - South Coast Air Quality Management District Rule No. 1168, current edition, www.scaqmd.gov		
J. UL (RSD) - Roofing Materials and Systems Directory: Underwriters Laboratories Inc.		
1.04 PERFORMANCE REQUIREMENTS		
A. Roofing System Design: Provide membrane roofing system that is identical to systems that have been successfully tested in a qualified testing and inspecting agency to resist uplift pressures calculated according to ASCE/SEI 7.		
B. U.L. Fire Rating Roof Classification: The completed membrane roofing system shall achieve a minimum U.L. Class A Fire Rating.		
C. IBC Basic Wind Speed Design Criteria: The completed membrane roofing system shall meet or exceed IBC Basic Wind Speed Design Criteria of 130 mph, 3 second gust duration. Exposure B, urban and suburban areas. IBC uplift pressures shall be calculated in accordance with ASCE 7 "Minimum Design Loads for Building and Other Structures," but not less than the following:		
1. Fast: 30.4 psf.		
2. Perimeter: 51 psf.		
3. Corner: 75.9 psf.		
Project No. 15013 April 2018 Section 07 54 00	West Linn - Wilsonville School District West Linn HS Small Projects No. 3	07 54 00 - 1

SECTION 07 54 00 THERMOPLASTIC MEMBRANE ROOFING		
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1.01 SECTION INCLUDES		
A. Membrane Adhesive: As recommended by membrane manufacturer.		
E. Sealants: As recommended by membrane manufacturer.		
F. Miscellaneous Accessories: Provide pourable sealers, preformed cone and vent sheet flashings, preformed inside and outside corner sheet flashings, T-joint covers, lap sealants, termination reglets, and other accessories as recommended by membrane manufacturer.		
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B. U.L. Fire Rating Roof Classification: The completed membrane roofing system shall achieve a minimum U.L. Class A Fire Rating.		
C. IBC Basic Wind Speed Design Criteria: The completed membrane roofing system shall meet or exceed IBC Basic Wind Speed Design Criteria of 130 mph, 3 second gust duration. Exposure B, urban and suburban areas. IBC uplift pressures shall be calculated in accordance with ASCE 7 "Minimum Design Loads for Building and Other Structures," but not less than the following:		
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Project No. 15013 April 2018 Section 07 54 00	West Linn - Wilsonville School District West Linn HS Small Projects No. 3	07 54 00 - 1

Project No. 15013 April 2018 Section 07 54 00	West Linn - Wilsonville School District West Linn HS Small Projects No. 3	12 24 00 - 6
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SECTION 05 50 00 METAL FABRICATIONS		
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B. ASTM A123/A123M - Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products		
C. ASTM A500/A500M - Standard Specification for Cold-Formed Welded and Seamless Carbon Steel Structural Tubing in Rounds and Shapes		
D. ASTM A780/A780M - Standard Practice for Repair of Damaged and Uncoated Areas of Hot-Dip Galvanized Coatings		
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A. Product Data: For the following:		
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3. Indicate welded connections using standard AWS A2.4 welding symbol. Indicate net weld lengths.		
C. Paint Certification: Certifications from manufacturers of bolsters applied over shop primers certifying that shop primers are compatible with topcoats.		
D. Welder Certificate: Submit certification to welders employed on the project, verifying AWS qualification within the previous 12 months.		
1.05 PERFORMANCE REQUIREMENTS		
A. Thermal Movement: Allow for thermal movement from ambient and surface temperature changes acting on exterior metal fabrication by providing buckling, opening of joints, compressing of components, release of connections, and other detrimental effects.		
1. Temperature Change: 120 deg F, mean; 180 deg F, mean; surfaces.		
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A. Welding Qualifications: Qualify procedures and personnel according to the following:		
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Project No. 15013 April 2018 Section 05 50 00	West Linn - Wilsonville School District West Linn HS Small Projects No. 3	05 50 00 - 2

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1.03 REFERENCE STANDARDS		
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C. ANSI/SPRI IS-1 - Standard Field Test Procedure for Determining the Mechanical Uplift Resistance of Insulation Adhesives over Various Substrates		
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F. ASTM C1269 - Standard Specification for Field Rigid Cellular Polyisocyanurate Thermal Insulation Board		
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B. U.L. Fire Rating Roof Classification: The completed membrane roofing system shall achieve a minimum U.L. Class A Fire Rating.		
C. IBC Basic Wind Speed Design Criteria: The completed membrane roofing system shall meet or exceed IBC Basic Wind Speed Design Criteria of 130 mph, 3 second gust duration. Exposure B, urban and suburban areas. IBC uplift pressures shall be calculated in accordance with ASCE 7 "Minimum Design Loads for Building and Other Structures," but not less than the following:		
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3. Corner: 75.9 psf.		
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F. ASTM C1269 - Standard Specification for Field Rigid Cellular Polyisocyanurate Thermal Insulation Board		
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A. Roofing System Design: Provide membrane roofing system that is identical to systems that have been successfully tested in a qualified testing and inspecting agency to resist uplift pressures calculated according to ASCE/SEI 7.		
B. U.L. Fire Rating Roof Classification: The completed membrane roofing system shall achieve a minimum U.L. Class A Fire Rating.		
C. IBC Basic Wind Speed Design Criteria: The completed membrane roofing system shall meet or exceed IBC Basic Wind Speed Design Criteria of 130 mph, 3 second gust duration. Exposure B, urban and suburban areas. IBC uplift pressures shall be calculated in accordance with ASCE 7 "Minimum Design Loads for Building and Other Structures," but not less than the following:		
1. Fast: 30.4 psf.		
2. Perimeter: 51 psf.		
3. Corner: 75.9 psf.		
Project No. 15013 April 2018 Section 07 54 00	West Linn - Wilsonville School District West Linn HS Small Projects No. 3	07 54 00 - 1

SECTION 07 54 00 THERMOPLASTIC MEMBRANE ROOFING		
SECTION 07 54 00 THERMOPLASTIC MEMBRANE ROOFING		
1.01 SECTION INCLUDES		
A. Membrane Adhesive: As recommended by membrane manufacturer.		
E. Sealants: As recommended by membrane manufacturer.		
F. Miscellaneous Accessories: Provide pourable sealers, preformed cone and vent sheet flashings, preformed inside and outside corner sheet flashings, T-joint covers, lap sealants, termination reglets, and other accessories as recommended by membrane manufacturer.		
1.02 RELATED REQUIREMENTS		
A. Section 07 62 00 - Sheet Metal Flashing and Trim: Counterflashings, reglets and similar flashings.		
1.03 REFERENCE STANDARDS		
A. ANSI/SPRI ES-1 - Wind Design Standard for Edge Systems Used with Low Slope Roofing Systems		
B. ANSI/SPRI FS-1 - American National Standard - Standard Field Test Procedure for Determining the Withstand Resistance of Roofing Fasteners		
C. ANSI/SPRI IS-1 - Standard Field Test Procedure for Determining the Mechanical Uplift Resistance of Insulation Adhesives over Various Substrates		
D. ASCE 7 - Minimum Design Loads for Buildings and Other Structures		
E. ASTM C117/C117M - Standard Specification for Glass Mat Gypsum Substrate for Use as Sheathing		
F. ASTM C1269 - Standard Specification for Field Rigid Cellular Polyisocyanurate Thermal Insulation Board		
G. ASTM D4343/D4343M - Standard Specification for Poly(Vinyl Chloride) Sheet Roofing		
H. NRCA ML104 - The NRCA Roofing and Waterproofing Manual: National Roofing Contractors Association		
I. SOQAQD 1168 - South Coast Air Quality Management District Rule No. 1168, current edition, www.scaqmd.gov		
J. UL (RSD) - Roofing Materials and Systems Directory: Underwriters Laboratories Inc.		
1.04 PERFORMANCE REQUIREMENTS		
A. Roofing System Design: Provide membrane roofing system that is identical to systems that have been successfully tested in a qualified testing and inspecting agency to resist uplift pressures calculated according to ASCE/SEI 7.		
B. U.L. Fire Rating Roof Classification: The completed membrane roofing system shall achieve a minimum U.L. Class A Fire Rating.		
C. IBC Basic Wind Speed Design Criteria: The completed membrane roofing system shall meet or exceed IBC Basic Wind Speed Design Criteria of 130 mph, 3 second gust duration. Exposure B, urban and suburban areas. IBC uplift pressures shall be calculated in accordance with ASCE 7 "Minimum Design Loads for Building and Other Structures," but not less than the following:		
1. Fast: 30.4 psf.		
2. Perimeter: 51 psf.		
3. Corner: 75.9 psf.		
Project No. 15013 April 2018 Section 07 54 00	West Linn - Wilsonville School District West Linn HS Small Projects No. 3	07 54 00 - 1

Project No. 15013 April 2018 Section 07 54 00	West Linn - Wilsonville School District West Linn HS Small Projects No. 3	12 24 00 - 8
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SECTION 05 50 00 METAL FABRICATIONS		
SECTION 05 50 00 METAL FABRICATIONS		
1.01 SECTION INCLUDES		
A. Shop fabricated and manufactured steel including, but not limited to, the following:		
1. Metal bolsters.		
2. Pipe downspouts.		
3. Handrails for exterior ramps.		
1.02 RELATED REQUIREMENTS		
A. Section 03 30 00 - Cast-in-Place Concrete: Placement of metal fabrications in concrete.		
B. Section 05 12 00 - Structural Steel Framing: Structural steel column anchor bolts and related structural steel elements.		
C. Section 09 98 00 - High Performance Coating: Coating finish and metal primers for use for shop primers.		
1.03 REFERENCE STANDARDS		
A. ASTM A36/A36M - Standard Specification for Carbon Structural Steel		

SECTION 07 82 00 SHEET METAL FLASHING AND TRIM		
SECTION 07 82 00 SHEET METAL FLASHING AND TRIM		
PART 1 - GENERAL		
1.1 SUMMARY		
A. Fabricated sheet metal items, including window and door sill flashings, counterflashings, and other items as shown.		
B. Sealants for joints within sheet metal fabrications.		
1.2 RELATED REQUIREMENTS		
A. Section 08 43 13 Aluminum Framed Sluiceways, Window and Door Sill Flashings		
B. Section 07 82 00 - Joint Sealants		
1.3 REFERENCE STANDARDS		
A. AIAA 2605 - Voluntary Specification, Performance Requirements and Test Procedures for Superior Performing Organic Coatings on Aluminum Extrusions and Panels.		
B. ASTM A484/A484M - Standard Specification for Zinc-Coated, Zinc-Aluminum (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.		
C. ASTM A666 - Standard Specification for Annealed or Cold-Worked Austenitic Stainless Steel Sheet, Strip, Plate, and Flat Bar.		
D. ASTM D4214 - Standard Test Methods for Evaluating the Degree of Chalking of Exterior Paint Films.		
E. SMACNA (ASIM) - Architectural Sheet Metal Manual, Sheet Metal and Air Conditioning Contractors National Association.		
1.4 PERFORMANCE REQUIREMENTS		
A. General: Sheet metal flashing and trim assemblies as indicated shall withstand loads, structural movement, thermal induced movement, and exposure to weather without failure due to defective manufacture, fabrication, installation, or other defects in construction. Completed sheet metal flashing and trim shall not rotate, leak, or loosen, and shall remain watertight.		
B. Water infiltration: Provide sheet metal flashing and trim that does not allow water infiltration to building interior.		
1.5 SUBMITTALS		
A. Shop Drawings: Indicate material profile, painting pattern, painting details, fastening methods, fastening, terminations, and installation details.		
B. Warranties: Submit warranties specified in this Section.		
1.6 QUALITY ASSURANCE		
A. Perform work in accordance with SMACNA (ASIM) requirements and standard details, except as otherwise indicated.		
B. Fabricator and Installer Qualifications: Company specializing in sheet metal work with ten years of documented experience.		
1.8 DELIVERY, STORAGE, AND HANDLING		
A. Stack material to prevent twisting, bending, and abrasion, and to provide ventilation. Slope metal sheets to ensure drainage.		
B. Prevent contact with materials that could cause discoloration or staining.		
1.9 WARRANTY		
A. Special Project Warranty: Submit installer's warranty, on installer's standard or customized form, signed to reflect, covering the Work in this Section, including all components of flashing.		
West Linn - Wilsonville School District West Linn HS Small Projects No. 3	07 82 00 - 1	April 2018 Project 151018

SECTION 07 82 00 SHEET METAL FLASHING AND TRIM		
SECTION 07 82 00 SHEET METAL FLASHING AND TRIM		
PART 1 - GENERAL		
1.1 SUMMARY		
A. Fabricated sheet metal items, including window and door sill flashings, counterflashings, and other items as shown.		
B. Sealants for joints within sheet metal fabrications.		
1.2 RELATED REQUIREMENTS		
A. Section 08 43 13 Aluminum Framed Sluiceways, Window and Door Sill Flashings		
B. Section 07 82 00 - Joint Sealants		
1.3 REFERENCE STANDARDS		
A. AIAA 2605 - Voluntary Specification, Performance Requirements and Test Procedures for Superior Performing Organic Coatings on Aluminum Extrusions and Panels.		
B. ASTM A484/A484M - Standard Specification for Zinc-Coated, Zinc-Aluminum (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.		
C. ASTM A666 - Standard Specification for Annealed or Cold-Worked Austenitic Stainless Steel Sheet, Strip, Plate, and Flat Bar.		
D. ASTM D4214 - Standard Test Methods for Evaluating the Degree of Chalking of Exterior Paint Films.		
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B. Warranties: Submit warranties specified in this Section.		
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A. Perform work in accordance with SMACNA (ASIM) requirements and standard details, except as otherwise indicated.		
B. Fabricator and Installer Qualifications: Company specializing in sheet metal work with ten years of documented experience.		
1.8 DELIVERY, STORAGE, AND HANDLING		
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West Linn - Wilsonville School District West Linn HS Small Projects No. 3	07 82 00 - 2	April 2018 Project 151018

SECTION 07 82 00 SHEET METAL FLASHING AND TRIM		
SECTION 07 82 00 SHEET METAL FLASHING AND TRIM		
PART 1 - GENERAL		
1.1 SUMMARY		
A. Fabricated sheet metal items, including window and door sill flashings, counterflashings, and other items as shown.		
B. Sealants for joints within sheet metal fabrications.		
1.2 RELATED REQUIREMENTS		
A. Section 08 43 13 Aluminum Framed Sluiceways, Window and Door Sill Flashings		
B. Section 07 82 00 - Joint Sealants		
1.3 REFERENCE STANDARDS		
A. AIAA 2605 - Voluntary Specification, Performance Requirements and Test Procedures for Superior Performing Organic Coatings on Aluminum Extrusions and Panels.		
B. ASTM A484/A484M - Standard Specification for Zinc-Coated, Zinc-Aluminum (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.		
C. ASTM A666 - Standard Specification for Annealed or Cold-Worked Austenitic Stainless Steel Sheet, Strip, Plate, and Flat Bar.		
D. ASTM D4214 - Standard Test Methods for Evaluating the Degree of Chalking of Exterior Paint Films.		
E. SMACNA (ASIM) - Architectural Sheet Metal Manual, Sheet Metal and Air Conditioning Contractors National Association.		
1.4 PERFORMANCE REQUIREMENTS		
A. General: Sheet metal flashing and trim assemblies as indicated shall withstand loads, structural movement, thermal induced movement, and exposure to weather without failure due to defective manufacture, fabrication, installation, or other defects in construction. Completed sheet metal flashing and trim shall not rotate, leak, or loosen, and shall remain watertight.		
B. Water infiltration: Provide sheet metal flashing and trim that does not allow water infiltration to building interior.		
1.5 SUBMITTALS		
A. Shop Drawings: Indicate material profile, painting pattern, painting details, fastening methods, fastening, terminations, and installation details.		
B. Warranties: Submit warranties specified in this Section.		
1.6 QUALITY ASSURANCE		
A. Perform work in accordance with SMACNA (ASIM) requirements and standard details, except as otherwise indicated.		
B. Fabricator and Installer Qualifications: Company specializing in sheet metal work with ten years of documented experience.		
1.8 DELIVERY, STORAGE, AND HANDLING		
A. Stack material to prevent twisting, bending, and abrasion, and to provide ventilation. Slope metal sheets to ensure drainage.		
B. Prevent contact with materials that could cause discoloration or staining.		
1.9 WARRANTY		
A. Special Project Warranty: Submit installer's warranty, on installer's standard or customized form, signed to reflect, covering the Work in this Section, including all components of flashing.		
West Linn - Wilsonville School District West Linn HS Small Projects No. 3	07 82 00 - 3	April 2018 Project 151018

SECTION 07 82 00 SHEET METAL FLASHING AND TRIM		
SECTION 07 82 00 SHEET METAL FLASHING AND TRIM		
PART 1 - GENERAL		
1.1 SUMMARY		
A. Fabricated sheet metal items, including window and door sill flashings, counterflashings, and other items as shown.		
B. Sealants for joints within sheet metal fabrications.		
1.2 RELATED REQUIREMENTS		
A. Section 08 43 13 Aluminum Framed Sluiceways, Window and Door Sill Flashings		
B. Section 07 82 00 - Joint Sealants		
1.3 REFERENCE STANDARDS		
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B. ASTM A484/A484M - Standard Specification for Zinc-Coated, Zinc-Aluminum (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.		
C. ASTM A666 - Standard Specification for Annealed or Cold-Worked Austenitic Stainless Steel Sheet, Strip, Plate, and Flat Bar.		
D. ASTM D4214 - Standard Test Methods for Evaluating the Degree of Chalking of Exterior Paint Films.		
E. SMACNA (ASIM) - Architectural Sheet Metal Manual, Sheet Metal and Air Conditioning Contractors National Association.		
1.4 PERFORMANCE REQUIREMENTS		
A. General: Sheet metal flashing and trim assemblies as indicated shall withstand loads, structural movement, thermal induced movement, and exposure to weather without failure due to defective manufacture, fabrication, installation, or other defects in construction. Completed sheet metal flashing and trim shall not rotate, leak, or loosen, and shall remain watertight.		
B. Water infiltration: Provide sheet metal flashing and trim that does not allow water infiltration to building interior.		
1.5 SUBMITTALS		
A. Shop Drawings: Indicate material profile, painting pattern, painting details, fastening methods, fastening, terminations, and installation details.		
B. Warranties: Submit warranties specified in this Section.		
1.6 QUALITY ASSURANCE		
A. Perform work in accordance with SMACNA (ASIM) requirements and standard details, except as otherwise indicated.		
B. Fabricator and Installer Qualifications: Company specializing in sheet metal work with ten years of documented experience.		
1.8 DELIVERY, STORAGE, AND HANDLING		
A. Stack material to prevent twisting, bending, and abrasion, and to provide ventilation. Slope metal sheets to ensure drainage.		
B. Prevent contact with materials that could cause discoloration or staining.		
1.9 WARRANTY		
A. Special Project Warranty: Submit installer's warranty, on installer's standard or customized form, signed to reflect, covering the Work in this Section, including all components of flashing.		
West Linn - Wilsonville School District West Linn HS Small Projects No. 3	07 82 00 - 4	April 2018 Project 151018

SECTION 07 82 00 SHEET METAL FLASHING AND TRIM		
SECTION 07 82 00 SHEET METAL FLASHING AND TRIM		
PART 1 - GENERAL		
1.1 SUMMARY		
A. Fabricated sheet metal items, including window and door sill flashings, counterflashings, and other items as shown.		
B. Sealants for joints within sheet metal fabrications.		
1.2 RELATED REQUIREMENTS		
A. Section 08 43 13 Aluminum Framed Sluiceways, Window and Door Sill Flashings		
B. Section 07 82 00 - Joint Sealants		
1.3 REFERENCE STANDARDS		
A. AIAA 2605 - Voluntary Specification, Performance Requirements and Test Procedures for Superior Performing Organic Coatings on Aluminum Extrusions and Panels.		
B. ASTM A484/A484M - Standard Specification for Zinc-Coated, Zinc-Aluminum (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.		
C. ASTM A666 - Standard Specification for Annealed or Cold-Worked Austenitic Stainless Steel Sheet, Strip, Plate, and Flat Bar.		
D. ASTM D4214 - Standard Test Methods for Evaluating the Degree of Chalking of Exterior Paint Films.		
E. SMACNA (ASIM) - Architectural Sheet Metal Manual, Sheet Metal and Air Conditioning Contractors National Association.		
1.4 PERFORMANCE REQUIREMENTS		
A. General: Sheet metal flashing and trim assemblies as indicated shall withstand loads, structural movement, thermal induced movement, and exposure to weather without failure due to defective manufacture, fabrication, installation, or other defects in construction. Completed sheet metal flashing and trim shall not rotate, leak, or loosen, and shall remain watertight.		
B. Water infiltration: Provide sheet metal flashing and trim that does not allow water infiltration to building interior.		
1.5 SUBMITTALS		
A. Shop Drawings: Indicate material profile, painting pattern, painting details, fastening methods, fastening, terminations, and installation details.		
B. Warranties: Submit warranties specified in this Section.		
1.6 QUALITY ASSURANCE		
A. Perform work in accordance with SMACNA (ASIM) requirements and standard details, except as otherwise indicated.		
B. Fabricator and Installer Qualifications: Company specializing in sheet metal work with ten years of documented experience.		
1.8 DELIVERY, STORAGE, AND HANDLING		
A. Stack material to prevent twisting, bending, and abrasion, and to provide ventilation. Slope metal sheets to ensure drainage.		
B. Prevent contact with materials that could cause discoloration or staining.		
1.9 WARRANTY		
A. Special Project Warranty: Submit installer's warranty, on installer's standard or customized form, signed to reflect, covering the Work in this Section, including all components of flashing.		
West Linn - Wilsonville School District West Linn HS Small Projects No. 3	07 82 00 - 5	April 2018 Project 151018

SECTION 07 82 00 SHEET METAL FLASHING AND TRIM		
SECTION 07 82 00 SHEET METAL FLASHING AND TRIM		
PART 1 - GENERAL		
1.1 SUMMARY		
A. Fabricated sheet metal items, including window and door sill flashings, counterflashings, and other items as shown.		
B. Sealants for joints within sheet metal fabrications.		
1.2 RELATED REQUIREMENTS		
A. Section 08 43 13 Aluminum Framed Sluiceways, Window and Door Sill Flashings		
B. Section 07 82 00 - Joint Sealants		
1.3 REFERENCE STANDARDS		
A. AIAA 2605 - Voluntary Specification, Performance Requirements and Test Procedures for Superior Performing Organic Coatings on Aluminum Extrusions and Panels.		
B. ASTM A484/A484M - Standard Specification for Zinc-Coated, Zinc-Aluminum (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.		
C. ASTM A666 - Standard Specification for Annealed or Cold-Worked Austenitic Stainless Steel Sheet, Strip, Plate, and Flat Bar.		
D. ASTM D4214 - Standard Test Methods for Evaluating the Degree of Chalking of Exterior Paint Films.		
E. SMACNA (ASIM) - Architectural Sheet Metal Manual, Sheet Metal and Air Conditioning Contractors National Association.		
1.4 PERFORMANCE REQUIREMENTS		
A. General: Sheet metal flashing and trim assemblies as indicated shall withstand loads, structural movement, thermal induced movement, and exposure to weather without failure due to defective manufacture, fabrication, installation, or other defects in construction. Completed sheet metal flashing and trim shall not rotate, leak, or loosen, and shall remain watertight.		
B. Water infiltration: Provide sheet metal flashing and trim that does not allow water infiltration to building interior.		
1.5 SUBMITTALS		
A. Shop Drawings: Indicate material profile, painting pattern, painting details, fastening methods, fastening, terminations, and installation details.		
B. Warranties: Submit warranties specified in this Section.		
1.6 QUALITY ASSURANCE		
A. Perform work in accordance with SMACNA (ASIM) requirements and standard details, except as otherwise indicated.		
B. Fabricator and Installer Qualifications: Company specializing in sheet metal work with ten years of documented experience.		
1.8 DELIVERY, STORAGE, AND HANDLING		
A. Stack material to prevent twisting, bending, and abrasion, and to provide ventilation. Slope metal sheets to ensure drainage.		
B. Prevent contact with materials that could cause discoloration or staining.		
1.9 WARRANTY		
A. Special Project Warranty: Submit installer's warranty, on installer's standard or customized form, signed to reflect, covering the Work in this Section, including all components of flashing.		
West Linn - Wilsonville School District West Linn HS Small Projects No. 3	07 82 00 - 6	April 2018 Project 151018

SECTION 08 11 13 HOLLOW METAL DOORS AND FRAMES		
SECTION 08 11 13 HOLLOW METAL DOORS AND FRAMES		
PART 1 - GENERAL		
1.1 SUMMARY		
A. Fabricated hollow metal doors and frames.		
B. Accessories, including mineral fiber and groud.		
1.2 RELATED REQUIREMENTS		
A. Section 08 11 00 - Door Hardware		
B. Section 09 90 00 - High Performance Coatings, Field Painting		
1.3 REFERENCE STANDARDS		
A. ANSI/ISO A117.1 - American National Standard for Accessible and Usable Buildings and Facilities, International Code Council.		
B. ANSI A250.8 - Hardware on Standard Steel Doors (Reinforcement-Application)		
C. ANSI A250.9 - SD-100 Recommended Specifications for Standard Steel Doors and Frames		
D. ANSI A250.12 - Test Procedures and Acceptance Criteria for Prime Painted Steel Doors and Frames		
E. ASTM A663/A663M - Standard Specification for Mineral-Fiber Blanket Thermal Insulation for Light Frame Construction and Manufactured Housing		
F. ASTM C1363 - Standard Test Method for Thermal Performance of Building Assemblies by Means of a Hot Box Apparatus		
G. ASTM E136 - Standard Test Method for Behavior of Materials in a Vertical Tube Furnace at 750°C		
H. BHMA A156.115 - Hardware Preparation in Steel Doors and Steel Frames		
I. NAAMM HMA 840 - Guide Specifications for Installation and Storage of Hollow Metal Doors and Frames, The National Association of Architectural Metal Manufacturers		
J. NFPA 80 - Standard for Fire Doors and Other Opening Protective Devices		
K. UL (BMD) - Building Materials Directory, Underwriters Laboratories Inc.		
L. UL 10C - Standard for Positive Pressure Fire Tests of Door Assemblies		
1.4 SUBMITTALS		
A. Product Data: Materials and details of design and construction, hardware locations, termination points and locations, anchorage and fastening methods, and brackets.		
B. Shop Drawings: Details of design, showing elevations, gazing, frame profiles, and identifying location of different finishes, if any.		
C. Schedule: Provide a schedule of hollow metal work prepared by or under the supervision of supplier, using same nomenclature numbers for details and openings as those on Drawings.		
D. Product Test Reports: Based on evaluation of comprehensive tests performed by a qualified testing agency, for each type of hollow metal door and frame assembly.		
E. Installation Instructions: Manufacturer's published instructions, including any special installation instructions relating to this project.		
F. Manufacturer's Certificate: Certification that products meet or exceed specified requirements.		
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SECTION 08 11 13 HOLLOW METAL DOORS AND FRAMES

Opening List	
<u>Operation</u>	<u>Notes/Ref</u>
NRNC	05
CLPA-A	01
CLPA-B	02
CLPA-C	03
WSSA-A	04
WSSA-B	04
WSSA-C	04

		SECTION 08 60 GLAZING
	SECTION 08 60 GLAZING	
1.1 PART 1 GENERAL		
A. SECTION INCLUDES		
1. Insulated security glass units.		
2. Glazing components and accessories.		
3. Security glass systems.		
B. RELATED REQUIREMENTS		
1. Section 07 92 00 - Joint Finishes: Sealants for other than glazing purposes.		
2. Section 08 43 13 - Aluminum-Framed Storm Doors: Glazing installed in storm assembly but unrelated to Work of this Section.		
C. REFERENCE STANDARDS		
1. ASCE 1001 - Safety Standard for Architectural Glazing Materials.		
2. ANSI Z97.1 - American National Standard for Safety Glazing Materials Used in Buildings: Safety Performance Specifications and Methods of Test.		
3. ASCE 7 - Minimum Design Loads for Buildings and Other Structures.		
4. ASTM C920 - Standard Specification for Elastomeric Joint Sealants.		
5. ASTM E119 - Standard Test Methods for Fire Tests of Building Construction and Materials.		
6. ASTM E330 - Standard Practice for Determining Load Resistance of Glass in Buildings.		
7. ASTM E2310 - Standard Specification for Insulating Glass Unit Performance and Evaluation.		
8. CANA (USA) - CANA Glazing Manual: Glass Association of North America.		
9. CANA (USA) - CANA Sealsant Manual: Glass Association of North America.		
10. CANA (LORN) - CANA Laminated Glazing Reference Manual: Glass Association of North America.		
11. CGMA T36-2000 - North American Glazing Guidelines for Sealed Insulating Glass Units for Commercial & Residential Uses: Insulating Glass Manufacturers' Association.		
12. NFRC 100 - Procedure for Determining Penetration Protection U-Factors.		
13. NFRC 200 - Procedure for Determining Fenestration Product Solar Heat Gain Coefficient and Visible Transmittance at Normal Incidence.		
14. NFRC 300 - Test Method for Determining the Solar Optical Properties of Glazing Materials and Systems.		
D. SUBMITTALS		
1. Submit Section 01 30 00 - Administrative Requirements, for administrative purposes.		
2. Product Data on Insulating Glass Unit, Glazing Unit, and Security UGL Glazing Type. Provide data on physical and mechanical characteristics, size limitations, thermal handling and installation requirements.		
3. Security glazing manufacturer's requirements for installation of security glazing to meet performance requirements.		
4. Product Data on Glazing Components and Accessories: Provide chemical, functional, and safety characteristics, limitations, special application requirements. Identify available options.		
5. Section Burden: Provide manufacturer's full range of orders for glazing systems.		
6. Glazing Schedule: For glazing operations, prepare a schedule that lists start date and finishes for each opening and location.		

**SECTION 28
GU**

F. Manufacturer's Certificate: Certify that glass and glazing products meet or exceed specified requirements.

G. Maintenance Data: For each type of patterned glass to include in maintenance manuals. Outline proper cleaning methods that will not damage coatings.

H. Warranty: Provide samples of samples as follows:

- 1. **Warranty Documentation:** Submit manufacturer warranty and ensure that forms have been completed & Owner's name and registered with manufacturer.

1.05 QUALITY ASSURANCE

- A. **Perform Work in accordance with** GANA (ISI), GANA (ISI), GANA (ISIRI), IGMA (TMO) and IGMA (TMO) for glazing installation manuals. Mortar on copy on file.
- B. **Provide** Laboratory Labeling and testing a national, permanent marking agency acceptable to authority having jurisdiction. Label shall include manufacturer's name, type, glass thickness, and glazing standard with serial glass complex.
- 1. **Provide** safety glazing at locations defined in Section 24-06 of the Oregon Structural Specialty Code and where otherwise indicated.
- C. **including** Glass Fabricator: Company whose location and equipment are approved by local glass manufacturer.
- D. **Require** Qualifications: Company specializing in performing work of the type specified and at least five years documented experience.

1.06 FIELD CONDITIONS

- A. **Do not** install glazing when ambient temperature is less than 40 degrees F.
- B. **Maintain** minimum ambient temperature between, during and 24 hours after installation of glass compounds.

1.07 WARRANTY

- A. **including** Glass Units: Provide a ten (10) year manufacturer warranty to include coverage seal failure, interstate during or missing, including replacement of failed units.
- B. **Limited** Glass: Provide a ten (10) year manufacturer warranty to include coverage for replacement, including replacement of failed units.
- C. **At** warranties shall start at: Date of Substantial Completion.

PART 3 PRODUCTS

3.01 MANUFACTURERS

- A. **Primary** Glass Manufacturers:
 - 1. **Gardens Industries Corp.** www.sunglazingglass.com
 - 2. **Shogun North America** www.shogunusa.com
 - 3. **PPG Industries** www.ppgco.com/products
 - 4. **Substitutes:** Refer to Section 01 50 00 - Product Requirements
- B. **Commercial** Glass Fabricator:
 - 1. **Gerbelt's Glass** www.gerbeltsglass.com
 - 2. **Northwestern Industries** www.northwinglass.com
 - 3. **Northwestern Industries** www.northwinglass.com
 - 4. **Obsidian Building/Engineer** www.obsidianco.com
 - 5. **Waco** www.waco.com
 - 6. **Vitrum Industries** www.vitrumindustries.com
 - 7. **Substitutes:** Refer to Section 01 50 00 - Product Requirements
- C. **Security** Glass Manufacturers:
 - 1. **Scholar Guard Glass** www.scholarguardglass.com

[illegible]

F. Vapor Retarder and Air Barrier Seal: Provide completed assemblies that meet or exceed applicable code requirements and air barrier seal materials described in the following:

- 1. To discontinue with vapor retarder and air barrier seal materials described in the above.
- 2. To install the entire panel of multiple panel installing panels for the continuous vapor retarder and air barrier seal.
- 3. To maintain a continuous vapor retarder and air barrier throughout the design from glass pane to base to ceiling.

G. Thermal and Optical Performance: Provide exterior glazing products with performance properties as indicated. Performance properties are in accordance with manufacturer published data as determined with the following procedures and/or test methods.

- 1. Center of Glass U-Value: Comply with NFRC 100 using Lawrence Berkeley Laboratory (LBL) WINDOW 6 software.
- 2. Center of Glass Solar Heat Gain Coefficient (SHGC): Comply with NFRC 200.
- 3. Lawrence Berkeley Laboratory (LBL) WINDOW 6 computer program.
- 4. Solar Optical Properties: Comply with ASHRAE 90.1 test method.

H. Differential Shading: Design glass to limit thermal distress caused by differential solar radiation on glass face.

- 1. Provide fully tempered glass at clear edge at all windows.

2.5.3 GLAZING MATERIALS

A. Laminated Security Glass (Type I): Fully tempered laminated glass.

- 1. Laminated with two (2) 1/8" minimum safety glass strengthened substrates.
- 2. Interlayer: Clear.
- 3. Glass Thickness: Two (2) 3/16" nominal clear tempered safety glass.
- 4. Comply with ASTM C1366, Type 1 transparent film, Class 1; Quality 03.
- 5. Interlayer: ASTM C1366.
- 6. Comply with 15 USC 1201 and requirements for Category II.
- 7. Provide safety glazing labeling.
- 8. Product: SSG manufactured by Schott Glass Group.
- 7. Locations of Use: Interior storefront and entrances where indicated.

2.5.3 INSULATING GLASS UNITS

A. Insulators:

- 1. As Insulators.
- 2. Fabricate glass system and equipment is certified by glass manufacturing for glass, coating, and treatment involved and providing specified warranty.

B. Insulating Glass Units: Types as indicated.

- 1. Durability: Certified by a third party testing agency to comply with ASTM F1755.
- 2. Coated Glass: Comply with requirements of ASTM C1738 for polyurethane (PU) warm-edge spacer and double insulated (i.e.) low-e coatings on the glass coating face. IGU-C, coated exterior surface. IGU-CG, (i.e.) coated exterior glass face.
- 3. Warm-Edge Spacers:
 - a. Spacer Width: As required for specified insulating glass unit.
 - b. Products: As required to meet proper penetration U-factor; insulating gas composition and warranty requirements.
- 4. Spacer Color: Black.
- 5. Edge Seal:
 - a. Dual-Sealed System: Provide polyurethane/sealant as primary seal and butyl as secondary seal between glass and glass panes, and silicone sealant as secondary seal around perimeter.
 - b. Color: Black.

C. Insulated Clear Tempered Safety Glass Units (Type II): Double panes with silicone edge seal.

Revised: 11/2015
April 2018

Great Lakes - Winnetka School District
1000 N. Winnetka Avenue
Winnetka, IL 60093-2909

key plan

phase	cd
date	4/12/18

project # 15013

SPECIFICATIONS

A10.03

SECTION 08 80 00 GLAZING		
1. Locations of Use: At elevations where indicated (Above 7'-0").		
2. Outer pane of 8 mm clear tempered float glass with glass, inner pane of 8 mm clear tempered float glass.		
3. Place low E coating on No. 2 surface within the unit.		
4. Intersect: Contact: Argon.		
5. Durability: Certified by an independent testing agency to comply with ASTM E2190.		
6. Total unit thickness of 1 inch.		
7. Visible Light Transmittance: 70 percent minimum.		
8. Winter Nighttime U-Factor: 0.25 maximum.		
9. Solar Heat Gain Coefficient: 0.38 maximum.		
10. Products:		
a. SunGuard Clear SH 88 manufactured by Guardian Industries.		
b. Schott 80 Clear manufactured by PPG Industries.		
c. VE 2M manufactured by Vitrocon.		
G. Insulated Safety Security Glass Units Type T-1: Double pane with silicon sealant edge seal.		
1. Locations of Use: At elevations where indicated (Below 7'-0").		
2. Outer pane of 8 mm clear tempered float glass with glass, inner pane of laminated glass composed of Schott Guard Glass SGA.		
3. Place low E coating on No. 2 surface within the unit.		
4. Intersect: Contact: Argon.		
5. Durability: Certified by an independent testing agency to comply with ASTM E2190 and performance requirements indicated in Article 2.02 for Security Glazing.		
6. Total unit thickness of 1 inch.		
7. Visible Light Transmittance: 54 percent minimum.		
8. Winter Nighttime U-Factor: 0.24 maximum.		
9. Solar Heat Gain Coefficient: 0.29 maximum.		
10. Products:		
a. Schott Guard Glass SGA 100 with low E coating as required by glass manufacturer to meet performance requirements.		
2.04 GLAZING COMPONENTS		
A. Structural Glazing Sealant: Single component, neutral-curing, ASTM C820, Type S, Grade NS, Class 50, Use NT, G and A, ASTM C1154.		
1. Products:		
a. Dow Corning Corporation; 995 Silicone.		
2. Locations of Use: Security Glazing for T-1 and L-1.		
2.05 ACCESSORIES		
A. Setting Blocks: Electronic material of hardness needed to limit glass lateral movement is (a) 100 percent.		
B. Spacers: Electronic blocks or continuous substrates of hardness required by glass manufacturer to maintain glass in place for installation indicated.		
C. Edge Blocks: Electronic material of hardness needed to limit glass lateral movement is (a) 100 percent.		
D. Back-Bedding Material: Glazing Tapes: Preformed, butyl-based, 100 percent solids electronic tape, nonstaining and nonmarking in contact with nonporous substrate, with or without spacer and as recommended in writing by glass and glass manufacturer for application indicated.		
E. Glazing Gaskets: Resilient EPDM extruded shape to suit glazing channel retaining seal, color black.		
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SECTION 09 21 16 GYPSUM BOARD ASSEMBLIES		
B. Acoustic Assemblies: Construct walls indicated to receive acoustic insulation as acoustic assemblies. Provide materials and construction details to those listed in assembly indicated according to ASTM E96 and classified according to ASTM E413 by an independent testing agency.		
1.05 STORAGE AND HANDLING		
A. Store materials inside under cover and keep them dry and protected against damage from weather, condensation, direct sunlight, construction traffic, and other causes. Stack panels flat to prevent sagging.		
1.06 PROJECT CONDITIONS		
A. Environmental Limitations: Comply with ASTM C840 requirements or gypsum board manufacturer's written recommendations, whichever are more stringent.		
B. Do not install interior products until installation areas are enclosed and conditioned.		
C. Do not install panels that are wet, those that are moisture damaged, and those that are mold damaged.		
1. Indications that panels are wet or moisture damaged include, but are not limited to: discoloration, sagging, or irregular shape.		
2. Indications that panels are mold damaged include, but are not limited to: fuzzy or spotty surface contamination and discoloration.		
PART 2 PRODUCTS		
2.01 GYPSUM BOARD ASSEMBLIES		
A. Provide completed assemblies complying with ASTM C840 and GA-216.		
1. See PART 3 for finishing requirements.		
B. Interior Partitions: Provide completed assemblies with the following characteristics:		
1. Acoustic: Minimum: 44 minimum indicated in accordance with ASTM E413, based on tests conducted in accordance with ASTM E96, unless otherwise indicated.		
2.02 METAL FRAMING MATERIALS		
A. Manufacturers: Metal Framing, Connectors and Accessories: All products to be manufactured by current members of the Steel Stud Manufacturers Association (SSMA), or the Steel Framing Industry Association (SFIA).		
1. Caisseway Steel Building Systems LLC, www.caisseway.com.		
2. BSAFCD Corporation, www.bsafcd.com.		
3. Steeler, Inc. steeler.com		
4. The Steel Network, Inc. www.steelnetwork.com.		
5. Substitutions: See Section 01 60 00 - Product Requirements.		
B. Non-Carrier Framing System Components: ASTM C840, galvanized steel stud, of size and properties necessary to comply with ASTM C774 for the spacing indicated, with maximum deflection of wall framing of L/240 at 5 psf.		
1. Studs: "C" shaped with flat or formed webs with knurled faces.		
a. Minimum Base-Metal Thickness (Studs): 0.0152 inch (20 gage), unless otherwise indicated.		
b. Depth: As indicated.		
c. Runners: U shaped, sized to match studs.		
d. Members: U shaped, sized to match studs.		
e. Flat Strip and Backing Plate: Steel sheet for backing and bracing in length and width required.		
f. Minimum Base-Metal Thickness: 0.0152 inch (20 gage), unless otherwise indicated.		
C. Fastener Head to Structure Connections: Provide mechanical anchorage devices that accommodate deflection using welded rods, screws and anchor bolts, preventing rotation of studs while maintaining structural performance of partition.		
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SECTION 09 85 00 RESILIENT FLOORING		
B. Inter internal corners. At external corners, V cut back of base strip to 2/3 of its thickness and fast.		
C. Install base on solid backing. Bond lightly to wall and floor surfaces.		
D. Scribe and fit to door frames and other interruptions.		
2.03 INSTALLATION - ACCESSORIES		
A. Resilient Matting Accessories: But to adjacent materials and tightly adhere to substrates throughout length of each piece.		
1. Install reducer strips at edges of resilient flooring, carpet, and entry mat that would otherwise be exposed.		
2. Install transition strips at joints between one material to another.		
2.04 CLEANING		
A. Remove excess adhesive from floor, base, and wall surfaces without damage.		
B. Clean in accordance with manufacturer's written instructions.		
C. Cleaning: Remove temporary coverings and protection of adjacent work areas. Repair or replace damaged installed products. Perform initial maintenance on installed products in accordance with manufacturer's instructions, prior to owner's acceptance. Remove construction site debris from project site and neatly dispose of debris.		
1. Remove visible adhesive and other surface blemishes using cleaning methods recommended by flooring manufacturer.		
2. Sweep vacuum floor after installation.		
3. Do not perform initial maintenance for a minimum of 5 days after installation has been completed to allow the adhesive the proper time to set.		
4. Damp mop flooring to remove black marks and soil.		
2.05 PROTECTION		
A. Protect floor coverings from marks, stains, indentations, and other damage from construction operations and placement of equipment and fixtures during remainder of construction period.		
END OF SECTION		
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SECTION 08 80 00 GLAZING		
PART 3 EXECUTION		
3.01 VERIFICATION OF CONDITIONS		
A. Verify that openings for glazing are correctly sized and within tolerances, including those for size, squareness, and offsets in corners.		
B. Verify that the minimum required face and edge clearances are being provided.		
C. Verify that surfaces of glazing channels or recesses are clean, free of obstructions that may impede moisture movement, weeps are clear, and support framing is ready to receive glazing system.		
D. Verify that sealing between joints of glass framing members has been completed effectively.		
E. Proceed with glazing system installation only after unsatisfactory conditions have been corrected.		
3.02 PREPARATION		
A. Clean contact surfaces with appropriate solvent and wipe dry within maximum of 24 hours before glazing. Remove coatings that are not tightly bonded to substrate.		
B. Seal porous glazing channels or recesses with substrate compatible primer or sealer.		
C. Prime surfaces scheduled to receive sealant where required for proper sealant adhesion.		
3.03 INSTALLATION, GENERAL		
A. Install glazing in compliance with written instructions of glass, gaskets, and other glazing material manufacturers, unless more stringent requirements are indicated, including those in glazing referenced standards.		
B. Install glazing assembly in accordance with ASTM C1193, GANA (SA), and manufacturer's instructions.		
C. Security glazing is to be installed up to height of 7'-0" above finished floor.		
D. Do not exceed edge pressures around perimeter of glass from as stipulated by glass manufacturer.		
E. Set glass free of system with uniform pattern, draw bow, and similar characteristics.		
F. Set glass free in proper orientation so that coatings face exterior or interior as indicated.		
G. Prevent glass from contact with any contaminating substances that may be the result of construction operations such as, and not limited to the following: weld spatter, dust, oil, grease, slacking, mortar droppings, etc.		
3.04 INSTALLATION - DRY GLAZING METHOD (GASKET GLAZING)		
A. Application: Exterior and/or interior glazing. Seal glazing infills from either the exterior or the interior of the building.		
B. Install setting blocks in all recesses, sized and located to comply with referenced glazing publications, unless otherwise required by glass manufacturer. Set blocks in thin course of compatible sealant suitable for later bead.		
C. Seal glazing on setting blocks and push against fixed stop with sufficient pressure to push it full contact.		
D. Provide spacers for glass free where length plus width is larger than 50 inches.		
E. Provide edge blocking where needed to prevent glass free from moving sideways in glazing channel as recommended in writing by glass manufacturer and according to construction referenced glazing publications.		
F. Install removable stops without displacing glazing gasket, exert pressure for full continuous contact.		
3.05 INSTALLATION - WET GLAZING FOR SECURITY GLAZING		
A. Applications: Exterior and Interior Security Glazing.		
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SECTION 09 21 16 GYPSUM BOARD ASSEMBLIES		
1. Structural Performance: Maintain lateral load resistance and vertical moment capacity required by applicable code, when evaluated in accordance with AISI S100.		
D. Deflection: Truss: Steel sheet purlin manufactured to prevent cracking of finishes applied to interior partition framing resulting from deflection of structure above; in thickness not less than indicated for studs and in width to accommodate depth of studs.		
1. Products:		
a. Steel Network Inc (The), VersiCo SLS Series.		
b. Superior Metal Trim: Superior Flat Track System (SFT).		
2.03 BOARD MATERIALS		
A. Gypsum Board, General: Provide Type X.		
1. Lightweight gypsum wallboard is not allowed.		
B. Gypsum Wallboard: Paper-faced gypsum panels as defined in ASTM C1396/C1396M; sizes to minimize joints in plane, ends square cut.		
1. Application: Use for vertical surfaces.		
2. Thickness:		
a. Vertical Surfaces: 5/8 inch.		
E. Edges: Tapered.		
4. Paper-Faced Products:		
a. American Gypsum Company: FireBlock Type X and FireBlock Type C Gypsum Wallboard.		
b. CertainTeed Corporation: ProFlex Brand Gypsum Board or CertainTeed Gypsum Board.		
c. Georgia-Pacific Gypsum: ToughRock, ToughRock Fireguard, and ToughRock FireGuard C Gypsum Wallboard.		
d. National Gypsum Company: Gold Brand Brand Gypsum Wallboard.		
e. USG Corporation: Sheetrock Brand Firecode and Firecode C Gypsum Panels.		
2.04 ACCESSORIES		
A. Acoustic Insulation: ASTM C885, preformed glass fiber, friction fit type, unretired. Thickness to fit wall cavity, unless otherwise indicated.		
B. Exterior Outlet Box Pads: Provide pads to seal backs of outlet boxes penetrating acoustical walls.		
1. Products:		
a. Specified Series BGP Putty Pads manufactured by STI Specified Technologies, Inc. www.stispec.com.		
b. Lowvry's Outlet Box Pads manufactured by Lowvry's, www.lowvry.com.		
C. Finishing Accessories: ASTM C1047, galvanized metal or rolled zinc, unless noted otherwise and properties necessary to comply with ASTM C774 for the spacing indicated, with maximum deflection of wall framing of L/240 at 5 psf.		
1. Corners: L-shaped, exposed long flange meets joint compound.		
2. U-Bead: L-shaped, exposed short flange does not receive joint compound.		
D. Joint Materials: ASTM G475/G475M are as recommended by gypsum board manufacturer for project conditions.		
1. Tape: 2 inch wide, creased paper tape for joints and corners.		
2. Ready-mixed vinyl-based joint compound.		
E. All patches and casting wet applied on the building interior must meet the applicable limits of SCAQMD 1113.		
F. Beesox/Surface: Flat white basecoat for use on surfaces indicated to receive Level 4 and 5 finish. Beesox/Surface does not replace when coating for Level 5. Beesox is in addition to primer specified in Section 09 21 23 - Interior Painting.		
a. "Triple High Build Interior Latex Primer/Surface", 8281951, Sherwin Williams.		
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SECTION 09 85 13 TILE CARPETING		
PART 1 GENERAL		
1.01 SECTION INCLUDES		
A. Entry mat.		
1.02 RELATED REQUIREMENTS		
A. Section 09 80 01 - Finish Legend: Color selections.		
B. Section 09 85 00 - Resilient Flooring: Rubber transition strips.		
1.03 REFERENCE STANDARDS		
A. ASTM C886 - Standard Test Method for Ignition Characteristics of Finished Tissue Floor Covering Materials.		
B. SCAQMD 1168 - South Coast Air Quality Management District Rule No. 1168, current edition, www.scaqmd.gov.		
1.04 SUBMITTALS		
A. Product Data: Provide data on specified products, describing physical and performance characteristics, sizes, patterns, colors available, and method of installation.		
1. For carpet tile and entry mat, provide documentation including compliance with testing and product requirements of Carpet and Rug Institute's "Green Label Plus" program.		
2. For installation schedule, include printed statement of VOC content.		
B. Shop Drawings: Indicate layout of joints.		
C. Samples: Submit entry mat illustrating color and pattern design.		
D. Manufacturer's Installation Instructions: Indicate special procedures.		
E. Maintenance Data: Include maintenance procedures, recommended maintenance materials, and suggested schedule for cleaning.		
F. Maintenance Materials: Furnish the following for Owner's use in maintenance of project.		
1. Extra Entry Mat: Quantity equal to 5 percent of area installed of each color and pattern installed.		
1.05 QUALITY ASSURANCE		
A. Manufacturer Qualifications: Company specializing in manufacturing specified entry mat with minimum five years documented experience.		
B. Installer Qualifications: Company specializing in installing entry mat with minimum five years documented experience.		
1.06 FIELD CONDITIONS		
A. Store materials in area of installation for minimum period of 24 hours prior to installation.		
1.07 WARRANTY		
A. Special Warranty for Entry Mat: Manufacturer's standard form in which manufacturer agrees to repair or replace components of entry mat installation that fail in materials or workmanship within specified warranty period.		
1. Warranty does not include deterioration or failure of entry mat due to unusual traffic, failure of substrates, vandalism, or abuse.		
2. Failures include, but are not limited to: more than 10 percent loss of face fiber, edge raveling, snags, runs, loss of full bond strength, excessive static charge and delamination.		
3. Warranty Period: 3 years from Date of Substantial Completion.		
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SECTION 08 80 00 GLAZING		
B. Install glazing materials in strict accordance with security glass manufacturer's printed instructions.		
1. Install glass with "ATTACK BLOCK: GLAZE THIS SIDE OUT" labels clearly visible. Do not remove labels until project punch list process is complete.		
C. Install setting blocks in all recesses, sized and located to comply with referenced glazing publications, unless otherwise required by glass manufacturer. Set blocks in thin course of compatible sealant suitable for later bead.		
D. Provide spacers for glass free where length plus width is larger than 50 inches. Provide 1/8 inch minimum gap of spacers on glass and use thickness equal to sealant width.		
E. Voids and Filter Rods: Prevent exudation of sealant by forming voids or installing filter rods in the channels at the heel of joints and head (do not leave voids in the seal channels) except as otherwise created by glass manufacturer.		
F. Do not cut, seam, nip or abrade glass.		
G. Force glazing materials into channel to eliminate voids and to ensure complete wetting or bond of glazing materials to glass and channel surfaces.		
H. Tool exposed surfaces of glazing sealants to provide a sustainable "bead" away from glass.		
I. Cure glazing materials in accordance with manufacturer's printed instructions and recommendations to obtain high early bond strength, internal cohesive strength and surface durability.		
3.06 INSTALLATION - DRY GLAZING METHOD (TAPE AND TAPE)		
A. Application: Interior Glazed: Set glazing infills from the interior of the building.		
B. Cut glazing tape to length and set against permanent edge, projecting 1/16 inch above sight line.		
C. Place setting blocks at 1/4 points with edge block no more than 8 inch from corners.		
D. Seal glazing on setting blocks and push against tape for full contact at perimeter of pane or unit.		
E. Place glazing tape on free perimeter of glazing in same manner described above.		
F. Install removable stop without displacement of tape. Exert pressure on tape for full continuous contact.		
G. Carefully trim protruding tape with knife.		
3.07 CLEANING		
A. Remove excess glazing materials from finish surfaces immediately after application using solvents or cleaners recommended by manufacturers.		
B. Remove non-permanent stains immediately after glazing installation is complete.		
1. Remove security glass seals after punch list process is complete.		
C. Clean glass and adjacent surfaces after sealants are fully cured.		
D. Clean glass on both exposed surfaces not more than 4 days prior to Date of Substantial Completion in accordance with glass manufacturer's written recommendations.		
3.08 PROTECTION		
A. Protect exterior glass from damage immediately after installation by attaching crossed streamers to framing held away from glass. Do not apply markers to glass surface. Remove nonpermanent labels and clean surfaces.		
B. Protect glass from contact with contaminating substances resulting from construction operations. If, despite such protection, contaminating substances do come into contact with glass, remove substances immediately as recommended in writing by glass manufacturer.		
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SECTION 09 21 16 GYPSUM BOARD ASSEMBLIES		
C. Tape, 1/2 inch, and sand exposed joints, edges, and corners to produce smooth surface ready to receive finishes.		
1. Feather ends of joint compound so that sander is maximum 1/32 inch.		
3.09 TOLERANCES		
A. Maximum Variation of Finished Gypsum Board Surface from True Flatness: 1/8 inch in 10 feet in any direction.		
END OF SECTION		
PART 2 PRODUCTS		
2.01 EXAMINATION		
A. Verify that project conditions are appropriate for work of this section to commence. Start of wet system. Work will indicate acceptance of surfaces and conditions within each area.		
B. Protection: Provide temporary covering to eliminate splashing of joint compound onto adjacent surfaces.		
2.02 FRAMING INSTALLATION		
A. Metal Framing: Install in accordance with ASTM C774 and manufacturer's instructions.		
B. Studs: Space studs at 16 inches on center, unless otherwise indicated on Drawings.		
1. Extend partition framing to structure in all locations.		
2. Partitions: Terminating at Structure: Attach top runner to structure, maintain clearance between top of studs and structure, and connect studs to track using specified mechanical devices in accordance with manufacturer's instructions; verify free movement of top of stud connections; do not leave studs unattached to track.		
C. Blocking: Install mechanically fastened steel sheet blocking for support of:		
1. Wall mounted door hardware, including wall stops.		
3.03 BOARD INSTALLATION		
A. Comply with AISI S100, GA-216, and manufacturer's instructions. Install to minimize cut and joints, especially in highly visible locations.		
B. Single-Layer Non-Rated: Install gypsum board perpendicular to framing, with ends and edges occurring over trim framing.		
C. Installation on Metal Framing: Use screws for attachment of gypsum board.		
3.04 INSTALLATION OF TRIM AND ACCESSORIES		
A. Corner Beads: Install at external corners, using longest practical lengths.		
B. Edge Trim: Install at locations where gypsum board abuts dissimilar materials and as indicated.		
1. U-Bead: Use at all exposed terminations of gypsum board, at all floor joints and joints to receive sealants.		
2. L-Bead: Use at all exposed terminations of gypsum board, at all floor joints and joints to receive sealants.		
3.05 JOINT TREATMENT		
A. Paper-Faced Gypsum Board: Use paper joint tape, bedded with ready-mixed vinyl-based joint compound and finished with ready-mixed vinyl-based joint compound.		
B. Finish gypsum board in accordance with levels defined in ASTM C840 or GA-214, except as indicated below and as follows:		
1. Level 4:		
a. Locations of Use:		
1. Walls		
2. Apply one coat of specified beesox/surface to entire surface at manufacturer's recommended coverage rate of mil thickness.		
c. Primer and its application to surfaces are specified in Section 09 21 23 - Interior Painting and are in addition to beesox/surface.		
Power No. 11897 April 2018 Project 070218	West Linn - Wilsonville School District West Linn HS Small Projects No. 3	09 21 16 - 4

SECTION 09 85 13 TILE CARPETING		
PART 2 PRODUCTS		
2.01 ENTRY MAT		
A. Entry Mat EM-1: 100 percent Acacia solution-cured UV stabilized polypropylene fibers backed with EcoD composite rubber backing.		
1. Products:		
a. Super Nap 62 applied by Comau: www.comauflooring.com.		
b. Van Gelder: Inc. Product Champion Super Nap: www.vangelder-inc.com.		
2. VOC Content: Provide GRI (GLP) certified product in lieu of labeling, independent test report showing compliance is acceptable.		
3. Corrosion: As indicated in Section 09 80 01 - Finish Legend.		
2.02 ACCESSORIES		
A. Sub-Floor Piler: Portland cement based, type recommended by flooring material manufacturer.		
B. Edge Strips: Rubber as specified in Section 09 85 00 - Resilient Flooring.		
C. Adhesives:		
1. VOC-Content for Adhesives, including Flooring Adhesives: SCAQMD 1168.		
2. Compatible with materials being adhered, maximum VOC content of 50 g/L (GRI) certified in lieu of labeled product, independent test report showing compliance is acceptable.		
D. Seam Adhesive for Entry Mat: Recommended by entry mat manufacturer.		
E. Contact Adhesive for Entry Mat: Compatible with entry mat material, releasable type.		
PART 3 EXECUTION		
3.01 EXAMINATION		
A. Verify that sub-floor surfaces are smooth and flat within tolerances specified for that type of work and are ready to receive entry mat.		
B. Verify that sub-floor surfaces are dust-free and free of substances that could impair bonding of adhesive materials to sub-floor surfaces.		
3.02 PREPARATION		
A. Prepare sub-areas as recommended by flooring and adhesive manufacturers.		
B. Remove sub-floor ridges and bumps. Fill minor or local low spots, cracks, joints, holes, and other defects with sub-floor filler.		
C. Apply, trowel, and float filler to achieve smooth, flat, hard surface. Prohibit traffic until filler is cured.		
D. Vacuum clean substrate.		
3.03 INSTALLATION		
A. Starting installation constitutes acceptance of sub-floor conditions.		
B. Install entry mat in accordance with manufacturer's instructions and CRI 104 (Commercial).		
C. Cut entry mat clean. Fit entry mat tight to intersection with vertical surfaces without gaps.		
D. Lay entry mat in the following pattern:		
1. EM-1: Non-directional.		
E. Fully adhere entry mat to its substrate.		
F. Trim entry mat neatly at walls and around interruptions.		
3.04 ENTRY MAT INSTALLATION		
A. In addition to requirements indicated above, install in strict accordance with manufacturer's recommendations, using manufacturer's recommended adhesive suitable for project conditions.		
B. Follow manufacturer's recommended seaming techniques.		
Power No. 1894 April 2018 Project 070218	West Linn - Wilsonville School District West Linn HS Small Projects No. 3	09 85 13 - 2

SECTION 08 80 00 GLAZING		
C.	Examine glass surfaces adjacent to or below exterior concrete and other masonry surfaces frequent intervals during construction, but not less than once a month, for buildup of dirt, soot, alkaline deposits, or stains; remove as recommended in writing by glass manufacturer.	
D.	Remove and replace glass that is broken, chipped, cracked, or etched or that is damaged from natural causes, accidents, and vandalism during construction period prior to Date of Substantial Completion.	
END OF SECTION		
PART 1 GENERAL		
1.01 SECTION INCLUDES		
A. Metal stud wall framing.		
B. Acoustic insulation.		
C. Gypsum wallboard.		
1.02 REFERENCE STANDARDS		
A. AISI S100-12: North American Specification for the Design of Cold-Formed Steel Structural Members, American Iron and Steel Institute.		
B. ASTM C927/C927M - Standard Specification for Joint Compound and Joint Tape for Finishing Gypsum Board.		
C. ASTM C514 - Standard Specification for Nails for the Application of Gypsum Board.		
D. ASTM C546 - Standard Specification for Nonstructural Steel Framing Members.		
E. ASTM C754 - Standard Specification for Installation of Steel Framing Members to Receive Screw-Attached Gypsum Panel Products.		
F. ASTM C840 - Standard Specification for Application and Finishing of Gypsum Board.		
G. ASTM C919 - Standard Practice for Use of Sealants in Assembled Applications.		
H. ASTM C1047 - Standard Specification for Accessories for Gypsum Wallboard and Gypsum Veneer Base.		

Project No. 11874 April 2015	West Linn - Westville School District West Linn/55 Small Projects Sub. 3	08 80 00
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GENERAL STRUCTURAL NOTES

CODE REQUIREMENTS:

CONFORM TO THE 2014 OREGON STRUCTURAL SPECIALTY CODE (OSSC), BASED ON THE 2012 INTERNATIONAL BUILDING CODE (IBC).

EXISTING CONDITIONS:

ALL EXISTING CONDITIONS, DIMENSIONS AND ELEVATIONS SHALL BE FIELD VERIFIED. THE CONTRACTOR SHALL NOTIFY THE ARCHITECT OF ANY SIGNIFICANT DISCREPANCIES FROM CONDITIONS SHOWN ON THE DRAWINGS.

DESIGN CRITERIA:

DESIGN WAS BASED ON THE STRENGTH AND DEFLECTION CRITERIA OF THE OSSC. IN ADDITION TO THE DEAD LOADS, THE FOLLOWING LOADS AND ALLOWABLES WERE USED FOR DESIGN, WITH LIVE LOADS (L.L.) REDUCED PER OSSC:

DESIGN CRITERIA		
SNOW CRITERIA		
DESIGN ROOF SNOW LOAD	27 PSF MINIMUM IN ACCORDANCE WITH OSSC	
GROUND SNOW LOAD	Pg= 10 PSF IN ACCORDANCE WITH 2007 SNOW LOAD ANALYSIS FOR OREGON	
FLAT ROOF SNOW LOAD	Pf = 11 PSF	
SNOW EXPOSURE FACTOR	Ce = 1.0	
SNOW LOAD IMPORTANCE FACTOR	Is = 1.0	
THERMAL FACTOR	Ct = 1.0	
GEOTECHNICAL CRITERIA		
DESIGN BASED ON	OSSC TABLE 1806.2	
RETAINING WALLS - CANTILEVERED	35 PCF (EQUIVALENT FLUID PRESSURE)	
RETAINING WALLS - BRACED AT TOP	55 PCF (EQUIVALENT FLUID PRESSURE)	
ALLOWABLE SOIL PRESSURE:	1500 PSF	
WIND CRITERIA		
RISK CATEGORY	III	
MAIN WIND FORCE RESISTING SYSTEM	Vult = 130 MPH ULTIMATE DESIGN WIND SPEED (3-SECOND GUST)	
COMPONENTS AND CLADDINGS	Vult = 130 MPH ULTIMATE DESIGN WIND SPEED (3-SECOND GUST)	
EXPOSURE CATEGORY	B	
GUST/INTERNAL PRESSURE	GCpf = +/- 0.18	
SEISMIC CRITERIA		
RISK CATEGORY	III	
SEISMIC DESIGN CATEGORY	D	
SITE CLASS	C	
IMPORTANCE FACTOR	IE = 1.25	
MCE SPECTRAL ACCELERATION	Ss = 0.94	S1 = 0.41
SITE COEFFICIENT	Fa = 1.12	Fv = 1.59
DESIGN SPECTRAL ACCELERATION	SDS = 0.71	SD1 = 0.43

SPECIAL INSPECTION AND TESTING:

SPECIAL INSPECTION WILL BE PROVIDED BY THE OWNER BASED ON THE REQUIREMENTS OF CHAPTER 17 IN THE OSSC. CONTRACTOR SHALL PROVIDE SUFFICIENT NOTICE AND ACCESS FOR THE SPECIAL INSPECTOR TO PERFORM THESE INSPECTIONS.

SUBMITTALS:

SHOP DRAWINGS SHALL BE SUBMITTED TO THE ARCHITECT PRIOR TO FABRICATION AND CONSTRUCTION OF ALL STRUCTURAL ITEMS, INCLUDING THE FOLLOWING:

SUBMITTALS			
ITEM	SUBMITTAL (1)	DEFERRED SUBMITTAL (2)	COMMENTS
CONCRETE MIX DESIGNS	X		
CONCRETE REINFORCEMENT	X		
CONCRETE ANCHORAGES	X		
EMBEDDED STEEL ITEMS	X		
STRUCTURAL STEEL	X		
STEEL WELDING PROCEDURES	X		
STEEL DECKING	X		
STEEL FASTENERS	X		
EXTERIOR LIGHT GAUGE METAL FRAMING	X		
CURTAIN WALL, WINDOW WALL AND OTHER GLAZING SYSTEMS	X	X	

FOOTNOTES:

- SHOP DRAWINGS SHALL BE SUBMITTED TO THE ARCHITECT PRIOR TO FABRICATION AND CONSTRUCTION OF STRUCTURAL ITEMS. IF THE SHOP DRAWINGS DIFFER FROM OR ADD TO THE DESIGN OF THE STRUCTURAL DRAWINGS, THEY SHALL BEAR THE SEAL AND SIGNATURE OF A STRUCTURAL ENGINEER REGISTERED IN THE STATE OF OREGON. ANY CHANGES TO THE STRUCTURAL DRAWINGS SHALL BE SUBMITTED TO THE ARCHITECT AND ARE SUBJECT TO REVIEW AND ACCEPTANCE OF THE STRUCTURAL ENGINEER.
- DESIGN DRAWINGS, SHOP DRAWINGS, AND CALCULATIONS FOR THE DESIGN AND FABRICATION OF ITEMS THAT ARE DESIGNED BY OTHERS SHALL BEAR THE SEAL AND SIGNATURE OF A STRUCTURAL ENGINEER REGISTERED IN THE STATE OF OREGON, AND SHALL BE SUBMITTED TO THE ARCHITECT PRIOR TO FABRICATION. CALCULATIONS SHALL BE INCLUDED FOR ALL CONNECTIONS TO THE STRUCTURE, CONSIDERING LOCALIZED EFFECTS ON STRUCTURAL ELEMENTS INDUCED BY THE CONNECTION LOADS. DESIGN SHALL BE BASED ON THE REQUIREMENTS OF THE OSSC AND AS NOTED UNDER "DESIGN CRITERIA".

CONCRETE:

CONCRETE WORK SHALL CONFORM TO CHAPTER 19 OF THE OSSC. CONCRETE STRENGTHS SHALL BE VERIFIED BY STANDARD CYLINDER TESTS PER ASTM C39. MIX DESIGNS SHALL BE AS FOLLOWS:

CONCRETE MIX DESIGNS				
USE	f'c (PSI)	TEST AGE (DAYS)	MAX. W/C RATIO (NOTE 1)	MAX. AGGREGATE SIZE
ALL USES	3,000	28	0.50	1"

A WATER-REDUCING ADMIXTURE CONFORMING TO ASTM C494 USED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS SHALL BE INCORPORATED IN CONCRETE DESIGN MIXES. A HIGH-RANGE WATER-REDUCING (HRWR) ADMIXTURE CONFORMING TO ASTM C494 TYPE F OR G MAY BE USED IN CONCRETE MIXES PROVIDING THAT THE SLUMP DOES NOT EXCEED 10". AN AIR-ENTRAINING AGENT CONFORMING TO ASTM C260 SHALL BE USED IN CONCRETE MIXES FOR ALL CONCRETE EXPOSED TO WEATHER. THE AMOUNT OF ENTRAINED AIR BY VOLUME SHALL BE 5%.

THE CONTRACTOR SHALL SUBMIT CONCRETE MIX DESIGNS ALONG WITH TEST DATA COMPLIANT WITH ACI 318-11 OSSC SECTION 1805 A MINIMUM OF TWO WEEKS PRIOR TO PLACING CONCRETE. NO WATER MAY BE ADDED TO CONCRETE IN THE FIELD UNLESS SPECIFICALLY APPROVED IN WRITING BY THE CONCRETE SUPPLIER IN CONJUNCTION WITH THE CONCRETE MIX DESIGN.

REINFORCING STEEL:

ALL DEFORMED BAR REINFORCEMENT SHALL BE ASTM A615 GRADE 60 OR ASTM A706 GRADE 60.

STRUCTURAL STEEL:

STRUCTURAL STEEL SHALL BE:

STRUCTURAL STEEL	
MATERIAL GRADE	SHAPE
ASTM A36	CHANNELS, PLATES AND ANGLES, EXCEPT AS NOTED
ASTM A500, GRADE B (FY=48KSI)	HOLLOW STRUCTURAL SECTIONS (TUBES)
ASTM A53, GRADE B (FY=35 KSI)	PIPES

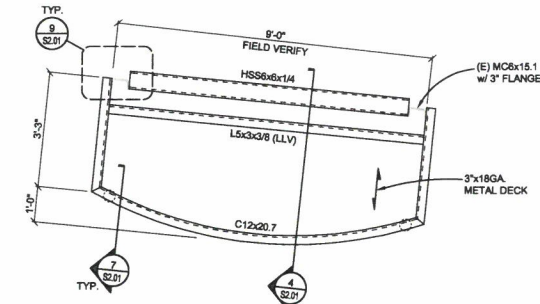
DESIGN, FABRICATION, AND ERECTION SHALL BE IN ACCORDANCE WITH THE "AISC SPECIFICATION FOR THE DESIGN, FABRICATION, AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS" WITH "COMMENTARY" AND THE "CODE OF STANDARD PRACTICE".

WELDING SHALL CONFORM TO THE AWS CODES FOR ARC AND GAS WELDING IN BUILDING CONSTRUCTION. WELDING SHALL BE PERFORMED IN ACCORDANCE WITH A WELDED PROCEDURE SPECIFICATION (WPS) AS REQUIRED IN AWS D1.1 AND APPROVED BY THE STRUCTURAL ENGINEER. THE WPS VARIABLES SHALL BE WITHIN THE PARAMETERS ESTABLISHED BY THE FILLER-METAL MANUFACTURER.

WELDS SHALL BE MADE USING E70XX ELECTRODES AND SHALL BE 3/16" MINIMUM, UNLESS OTHERWISE NOTED. WELDING SHALL BE BY AWS CERTIFIED WELDERS.

STEEL DECK:

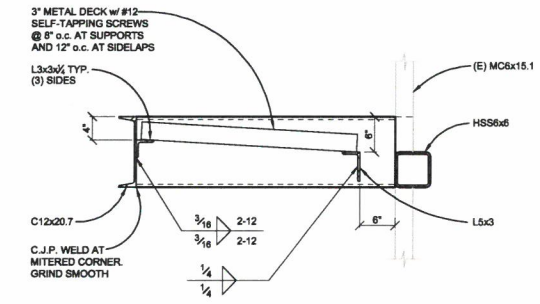
STEEL ROOF DECK SHALL BE 3" TYPE N OF THE GAUGE SHOWN ON THE PLANS. STEEL DECK SHALL CONFORM TO ASTM A653 DESIGNATION SS, GRADE 50 (Fy = 50 KSI). THE GALVANIZED COATING SHALL CONFORM TO ASTM A653, G60.



NOTE:
REF. ARCH. DRAWINGS FOR TOP OF STEEL ELEVATIONS.

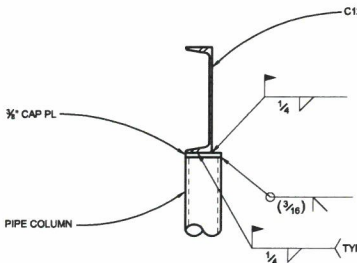
CANOPY FRAMING PLAN

1/2"=1'-0"



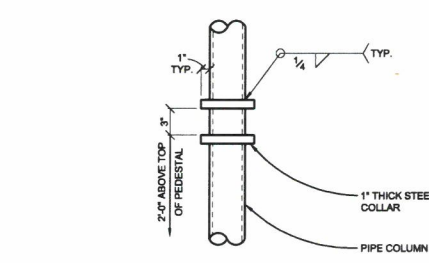
SECTION AT CANOPY

1"=1'-0"



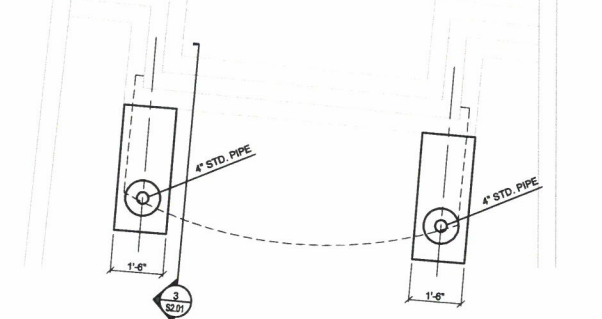
CONN. AT COLUMN

1 1/2"=1'-0"



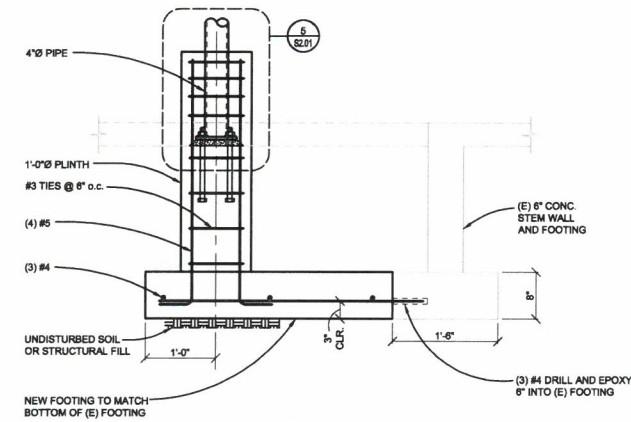
PIPE COLLAR DETAIL

1 1/2"=1'-0"



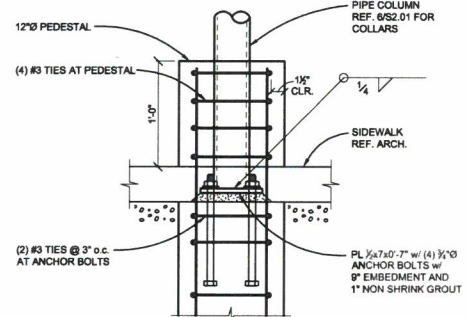
CANOPY FOUNDATION PLAN

1/2"=1'-0"



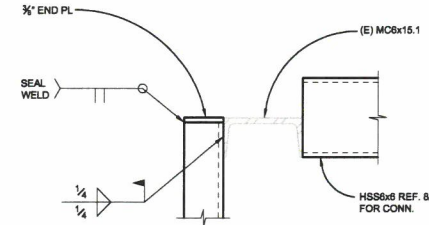
SECTION AT FOOTING

1"=1'-0"



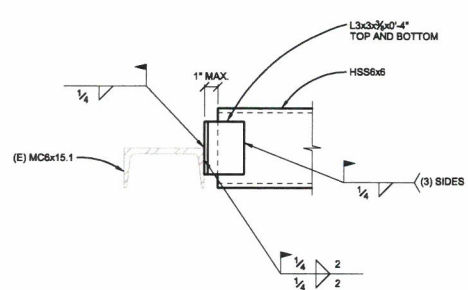
DETAIL AT PIPE COLUMN

1 1/2"=1'-0"





CHANNEL CONN.

N.T.S.



HSS CONN.

N.T.S.

4/10/18

PROJECT: 15013

key plan	
phase	cd
date	4/12/18
project #	15013
SYMBOLS, LEGENDS & ABBREVIATIONS - ELEC <div style="font-size: 2em; font-weight: bold; margin-top: 10px;">E0.01</div>	

CEILING

MIN 6"

8

FIRE

WORKING SURFACE (TYP)

BACKSPLASH

80" (MAX)
60" (MIN)

48"

FINISHED FLOOR

8"

18"

1

2

3

4

5

6

7

8

GENERAL NOTES:

1. LOCATE ALL FIRE ALARM DEVICES PER CODE.
2. LOCATE ALL ACCESSIBLE SWITCHES PER ADA GUIDELINES.
3. FIELD COORDINATE ALL ABOVE COUNTER DEVICES WITH MILLWORK CONTRACTOR.
4. IF APPLICABLE, TELCOM CONSULTANTS DRAWINGS TAKE PRECEDENCE OVER THIS DETAIL FOR TELCOM DEVICES.

NOTES:

- 1 TELECOM OUTLET
- 2 RECEPTACLE
- 3 FIRE ALARM PULL STATION
- 4 LIGHT SWITCH
- 5 CARD READER
- 6 WALL PHONE
- 7 ABOVE COUNTER DEVICE
MAINTAIN A CONSISTANT HEIGHT
THROUGHOUT SPACE
- 8 FIRE ALARM STROBE

ELECTRICAL SPECIFICATIONS

A. THE INTENT IS TO PROVIDE A COMPLETE AND WORKABLE FACILITY WITH COMPLETE SYSTEMS AS SHOWN, SPECIFIED AND REQUIRED BY APPLICABLE CODES. THE COMPLETED INSTALLATION SHALL CONFORM TO ALL APPLICABLE FEDERAL, STATE AND LOCAL CODES, ORDINANCES AND REGULATIONS INCLUDING NECESSARY PERMITS AND INSPECTIONS REQUIRED BY THE GOVERNING AUTHORITIES. DO ALL WORK IN A NEAT, WORKMANLIKE, FINISHED AND SAFE MANNER, ACCORDING TO THE LATEST PUBLISHED N.E.C.A. STANDARDS OF INSTALLATION, UNDER COMPETENT SUPERVISION. INSTALL ALL GROUNDING AS REQUIRED BY THE NATIONAL ELECTRICAL CODE.

B. VISIT THE SITE PRIOR TO BIDDING TO BECOME FAMILIAR WITH EXISTING CONDITIONS AND ALL OTHER FACTORS WHICH MAY AFFECT THE EXECUTION OF THIS WORK. INCLUDE ALL RELATED COSTS IN THE INITIAL PROPOSAL.

C. ALL NEW MATERIALS SHALL BE OF THE BEST QUALITY, MANUFACTURED IN ACCORDANCE WITH NEMA, ANSI, U.L. OR OTHER APPLICABLE STANDARDS. THE USE OF MANUFACTURER'S NAMES, MODELS AND NUMBERS IS INTENDED TO ESTABLISH STYLE, QUALITY, APPEARANCE AND USEFULNESS. PROPOSED SUBSTITUTIONS WILL REQUIRE PRE-BID WRITTEN APPROVAL OF THE ARCHITECT.

D. SUBMIT FOR THE ARCHITECT'S APPROVAL A MATERIAL LIST CONTAINING THE MANUFACTURER'S DETAILED SPECIFICATIONS AND DATA SHEETS FOR EQUIPMENT TO BE FURNISHED. SUBMIT 6 COPIES OF DATA IN 3-POINT COVERED BINDERS, INDEXED BY SYSTEM, FOR THE FOLLOWING ITEMS OF EQUIPMENT AND SYSTEMS: BRANCH CIRCUIT PANELS, CIRCUIT BREAKERS, CONDUCTORS, WIRING DEVICES, RACEWAY AND LUMINAIRES.

E. PROTECT ALL ELECTRICAL MATERIAL AND EQUIPMENT INSTALLED UNDER THIS DIVISION AGAINST DAMAGE BY OTHER TRADES, WEATHER CONDITIONS OR ANY OTHER CAUSES. EQUIPMENT FOUND DAMAGED OR IN OTHER THAN NEW CONDITION WILL BE REJECTED AND REQUIRE REPLACEMENT.

F. KEEP OUTAGES TO OCCUPIED AREAS TO A MINIMUM AND PREARRANGE ALL OUTAGES WITH THE OWNER'S REPRESENTATIVE. REQUESTS FOR OUTAGES SHALL STATE THE SPECIFIC DATES AND HOURS AND THE MAXIMUM DURATION, WITH THE OUTAGES KEPT TO THESE SPECIFIC TIMES. THIS CONTRACTOR WILL BE LIABLE FOR ANY DAMAGES RESULTING FROM UNSCHEDULED OUTAGES OR FOR THOSE NOT CONFINED TO THE PREAPPROVED TIMES. INCLUDE ALL COSTS FOR OVERTIME LABOR AS NECESSARY TO MAINTAIN ELECTRICAL SERVICES IN THE INITIAL BID PROPOSAL.

G. TEMPORARY WIRING AND FACILITIES, IF USED, SHALL BE REMOVED AND THE SITE LEFT CLEAN BEFORE FINAL ACCEPTANCE.

H. REMOVE OR RELOCATE ALL ELECTRICAL WIRING, EQUIPMENT, FIXTURES, ETC., AS MAY BE ENCOUNTERED IN REMOVED OR REMODELED AREAS IN THE EXISTING CONSTRUCTION AFFECTED BY THIS WORK. WIRING WHICH SERVES USABLE EXISTING OUTLETS SHALL BE RESTORED AND ROUTED CLEAR OF THE CONSTRUCTION OR DEMOLITION. REMOVE ALL WIRING TO BE ABANDONED TO LEAVE SITE CLEAN. REMOVED MATERIALS NOT SCHEDULED FOR REUSE SHALL BECOME THE PROPERTY OF THE CONTRACTOR FOR REMOVAL FROM THE SITE.

I. COOPERATE WITH ALL OTHER TRADES FOR PROPER INSTALLATION OF ALL ITEMS OF EQUIPMENT. CONSULT THE DRAWINGS OF ALL OTHER TRADES OR CRAFTS TO AVOID CONFLICTS WITH CABINETS, COUNTERS, EQUIPMENT, STRUCTURAL MEMBERS, ETC. IN GENERAL, THE ARCHITECTURAL DRAWINGS GOVERN BUT CONFLICTS SHALL BE RESOLVED PRIOR TO ROUGH-IN.

J. LEAVE THE SITE CLEAN AND READY FOR OCCUPANCY. REMOVE ALL DIRT, DEBRIS, EMPTY CARTONS, TOOLS, CONDUIT AND WIRE SCRAPS AND ALL MISCELLANEOUS SPARE EQUIPMENT AND MATERIALS USED IN THIS DIVISION OF THE WORK DURING CONSTRUCTION. ALL COMPONENTS SHALL BE FREE OF DUST, GRIT AND FOREIGN MATERIALS, LEFT AS NEW BEFORE FINAL ACCEPTANCE OF WORK.

K. FURNISH WRITTEN GUARANTEE TO THE OWNER, EFFECTIVE FOR A PERIOD OF ONE YEAR AFTER DATE OF SUBSTANTIAL COMPLETION, COVERING ALL DEFECTS IN CONTRACTOR FURNISHED MATERIALS AND WORKMANSHIP. THE CONTRACTOR SHALL AGREE TO REMEDY ANY DEFECT BY REPLACEMENT OF DEFECTIVE PART WITHOUT ADDITIONAL COST TO OWNER DURING THE PERIOD OF GUARANTEE. INCANDESCENT LAMPS ARE EXEMPT FROM THE GUARANTEE.

16400 SERVICE AND DISTRIBUTION

A. ALL MATERIALS SHALL BE NEW AND CURRENTLY MANUFACTURED.

B. ALL MATERIAL SHALL UL LABELED AND MEET ALL INDUSTRY STANDARDS.

C. PROVIDE ENGRAVED EQUIPMENT NAME PLATES ON ALL EQUIPMENT, NEW NAME PLATES TO MATCH EXISTING STYLE AND COLOR.

D. PROVIDE ALL SUPPORT HARDWARE AND SYSTEMS FOR ELECTRICAL WORK.

E. CONDUIT RACEWAYS:

1. ALL WIRING FOR POWER AND SYSTEMS SHALL BE CONDUCTORS IN CONDUIT AND SHALL BE CONCEALED IN WALLS, ABOVE CEILINGS, IN SLABS OR UNDERGROUND, AND SHALL BE OF THE FOLLOWING MATERIALS:

a. FEEDER- RIGID STEEL EXCEPT ABOVE 8'-0" THEN EMT

b. BRANCH CIRCUIT, TELEPHONE AND COMMUNICATION-EMT

c. FINAL CONNECTIONS FROM OUTLET BOXES TO LIGHT FIXTURES, MOTORS, OR APPLIANCES-FLEXIBLE STEEL CONDUIT MAXIMUM 48"

2. EXPOSED WIRING SHALL BE IN CONDUIT AND SHALL BE ROUTED AS HIGH AS POSSIBLE AND PARALLEL OR PERPENDICULAR TO STRUCTURAL ELEMENTS.

3. PAINT ALL EXPOSED CONDUITS, COLOR AS DIRECTED BY OWNER.

4. INSULATED CONDUIT BUSHINGS AT EACH END OF EVERY CONDUIT RUN.

G. CONDUCTORS:

1. PROVIDE CONDUCTORS FOR ALL CIRCUITING, WIRING, AND SYSTEMS.

2. CONDUCTORS SHALL BE PROPERLY PHASE AND COLOR CODED:

a. COLOR CODING: 208Y/120V 480Y/277V

PHASE A	BLACK	BROWN
PHASE B	BLUE	ORANGE
PHASE C	RED	YELLOW
NEUTRAL	WHITE	GRAY
GROUND	GREEN	GREEN

3. UTILIZE CONDUCTORS AND CONNECTORS AS FOLLOWS:

a. #10 AND SMALLER - SOLID COPPER, THINWALL COLOR CODED.

b. #8 AND #6 - STRANDED COPPER THINWALL COLOR CODED.

c. TYPE AC FLEXIBLE CABLE WITH ISOLATED GROUND WIRE.

a. SET SCREWBOLTED TYP. FOR #4 AND LARGER COPPER CONNECTORS.

f. COMPLETELY INSULATE EACH CONNECTION, SPLICE AND TERMINATE.

g. USE OF ALUMINUM (AL) IS STRICTLY PROHIBITED.

h. MINIMUM CONDUCTOR SIZE SHALL BE #12 AWG WITH THWN INSULATION IN CONDUIT.

4. LABEL CIRCUIT ON THE CONDUCTOR AT EACH BOX.

H. WALL SWITCHES:

1. SINGLE POLE: 20 AMPERE, QUIET TYPE, GROUNDED, COMMERCIAL SPECIFICATION GRADE.

. RECEPTACLES:

1. DUPLEX: 20 AMPERE, GROUNDED, COMMERCIAL SPECIFICATION GRADE.

2. ALL RECEPTACLES SHALL BE RECESSED, UNLESS NOTED OTHERWISE.

J. OUTLET BOXES:

1. ATTACH SECURELY TO BUILDING CONSTRUCTION SUPPORT.

2. MASONARY BOXES RACO OR STEEL CITY.

3. EXPOSED BOXES CAST TYPE SIMILAR TO HINDS FS.

4. ALL OTHERS STAMPED STEEL.

K. GROUNDING:

1. PROVIDE EQUIPMENT GROUNDING CONDUCTOR IN EACH CONDUIT.

2. PROVIDE GROUNDING FOR PANELBOARD AND EQUIPMENT.

M. LIGHTING FIXTURES:

1. LIGHT FIXTURES SHALL BE PROVIDED BY CONTRACTOR. CONTRACTOR SHALL BE RESPONSIBLE FOR MOUNTING AND FINAL CONNECTION OF ALL FIXTURES INCLUDING, BUT NOT LIMITED TO, RECESSED LIGHT, DOWN LIGHTS, PENDANT LIGHTS, DISPLAY CASE LIGHTING, TASK LIGHTING, AND REQUIRED EMERGENCY LIGHTS.

2. COORDINATE FIXTURE TRIM AND MOUNTING ACCESSORIES WITH CEILING TYPE INWHICH IT IS BEING INSTALLED.

3. PROVIDE ELECTRONICDIMMING BALLAST.

4. MATCH VOLTAGE OF FIXTURE TO CIRCUIT TO WHICH IT IS SHOWN CONNECTED.

P. WIRING DEVICE COVER PLATES AND DEVICES:

1. ALL RECEPTACLE AND TELEPHONE PLATES SHALL BE NEW BRUSHED FINISHED ALUMINUM WITH GRAY DEVICES.

a. MOUNTING HEIGHTS ARE NOTED ABOVE FINISHED FLOOR, REFER TO ARCHITECTURAL ELEVATIONS.

2. WIRING DEVICES SHALL BE COMPLETE WITH ALL HARDWARE AND COVER PLATES AND SHALL BE GROUNDED TO BOX BY GREEN GROUND WIRE PIGTAIL.

3. PROVIDE DEDICATED DEVICES FOR ALL EQUIPMENT, ITEMS, AND APPLIANCES.



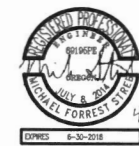
key plan

phase	cd
date	4/12/18
project #	15013

SPECIFICATIONS -
ELECTRICAL
E0.02



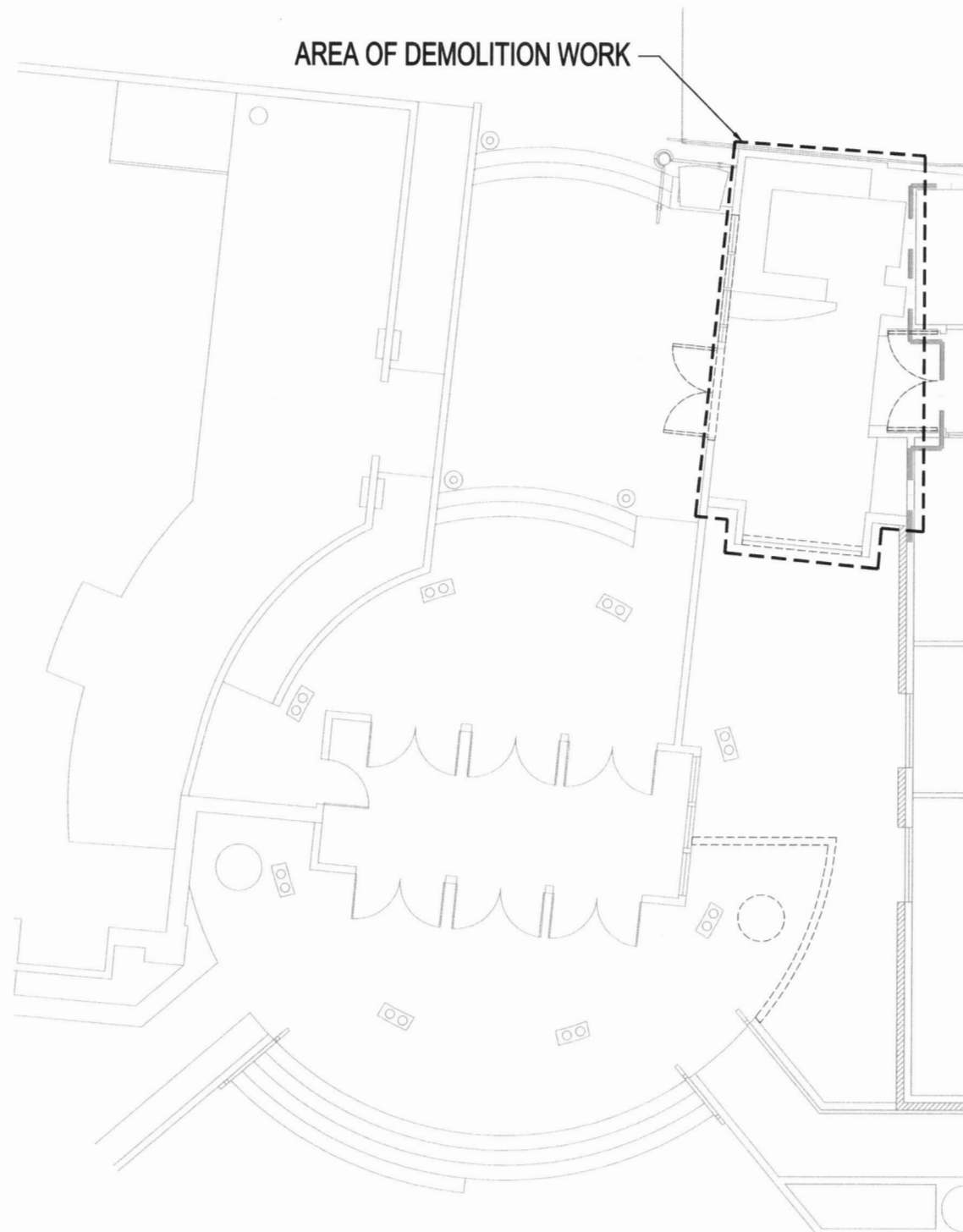
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OVERALL PLAN -
ELECTRICAL
E1.01

4/18/18 Time: 3:06pm File: P:\2018\18-1230 - MWL\18-1230 Entry Ventilation & 700 Blag Shop\01 Production\02 CAD\PROJECT 3\12.01.dwg User: mwendy.cooper

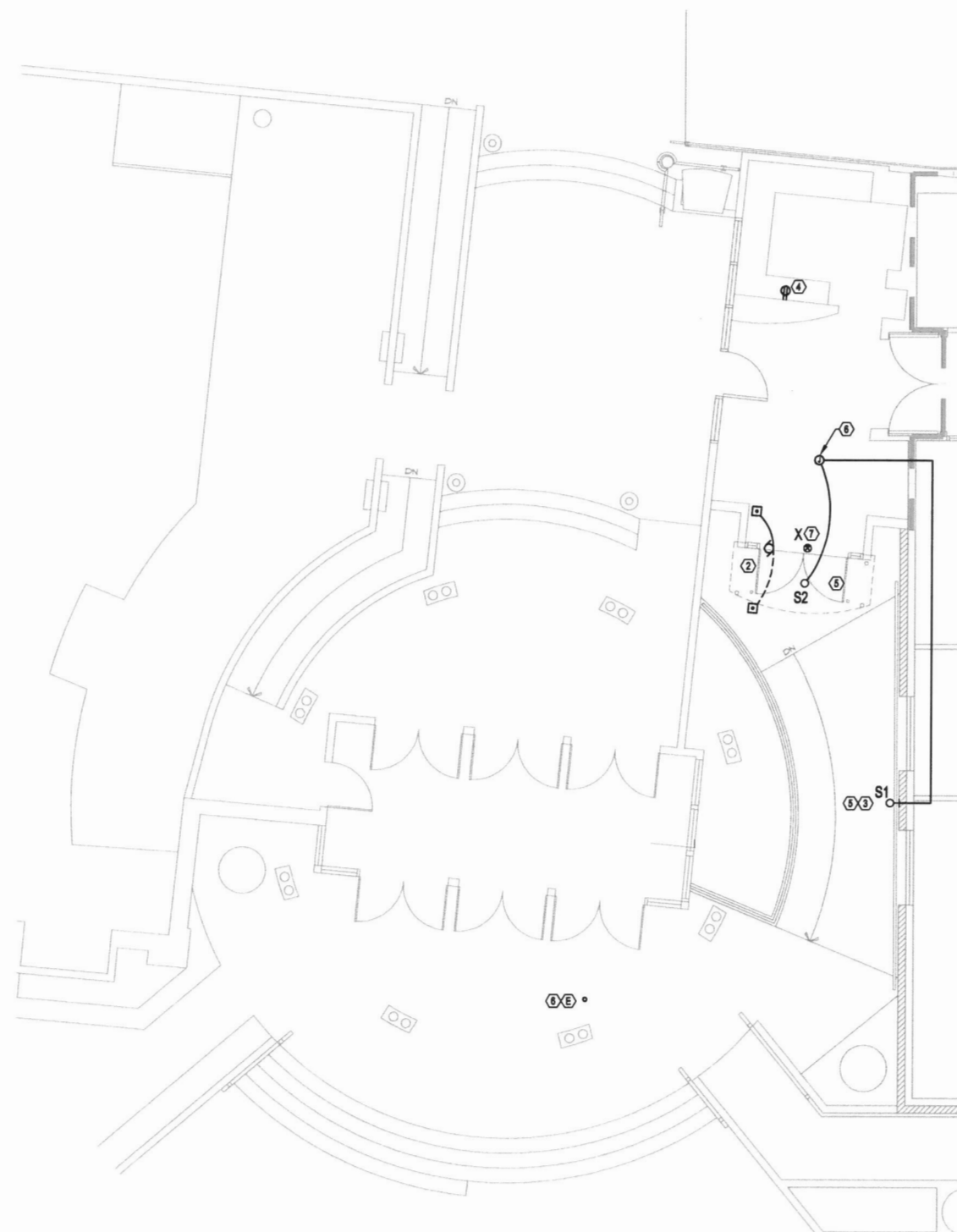
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DEMOLITION FLOOR PLAN - ELECTRICAL

SCALE: 1/4" = 1'-0"

2



REMODELED FLOOR PLAN - REVISED EXTERIOR ENTRY

SCALE: 1/4" = 1'-0"

1



GENERAL NOTES:

1. MAINTAIN CONTINUITY OF EXISTING SYSTEMS WITHIN DASHED BOUNDARY DURING REMOVAL OF INTERIOR AND EXTERIOR WALLS.
2. PROVIDE 120V CONNECTION AND FIRE ALARM RELAY FOR NEW MAGNETIC DOOR HOLDS FROM PANEL 21S1.

NOTES:

1. PROVIDE EXIT SIGN TO MATCH EXISTING. CONNECT TO NEAREST UNSWITCHED EMERGENCY LIGHTING CIRCUIT.
2. ADA DOOR OPERATOR: PROVIDE 120V TO DOOR OPERATOR FROM PANEL 21S1. SEE E101 FOR LOCATION. PROVIDE CONTROL CONNECTIONS IN CONDUIT TO PUSHBUTTONS PER MANUFACTURER REQUIREMENTS.
3. MOUNT FIXTURE DIRECTLY ABOVE EXISTING SPEAKER. CORE THROUGH BRICK EXTERIOR INTO ACCESSIBLE CEILING SPACE.
4. MOUNT RECEPTACLE IN CASEWORK. CONNECT TO EXISTING RECEPTACLE CIRCUIT SERVING AREA. CONCEAL MC CABLE IN WALL.
5. CONNECT TO EXISTING EMERGENCY EXTERIOR LIGHTING CIRCUIT SERVING MAIN ENTRY LIGHTING.
6. EXISTING DOWNLIGHTS IN CANOPY ARE CONTROLLED BY LIGHTING CONTROL PANEL LCP2. AS-BUILT DRAWINGS INDICATE CIRCUIT IS ROUTED ABOVE RECEPTION AREA CEILING. INTERCEPT AND EXTEND CIRCUIT TO NEW TYPE S1 AND S2 LUMINAIRES.
7. CONNECT EXIT SIGN TO NEAREST UNSWITCHED EXISTING CIRCUIT SERVING EXIT SIGNS.



key plan

phase cd

date 4/12/18

project # 15013

FLOOR PLAN -
ELECTRICAL

E2.01

