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KAISER PERMANENTE®

North Lancaster Medical Office
Site Improvements
Salem, Oregon
Construction Documents



KAISER PERMANENTE®

National Facilities Services
Post Office Box 12916
Oakland, California 94604

No.	Revisions	Date	Appr.

jrj architects, llc

15455 NW Greenbrier Pkwy.
Suite 260
Beaverton, OR 97006
(503) 690.1779 p

Abbreviations

AFF	ABOVE FINISH FLOOR	W/MAX	MAXIMUM
ADJ	ADJACENT	M.E.	MATCH EXISTING
ALUM	ALTERNATIVE	MECH	MECHANICAL
APPROX	APPROXIMATE	MFR	MANUFACTURER
ARCH	ARCHITECTURAL	MB	MACHINE BOLT
AUTO	AUTOMATIC	MH	MANHOLE
		MIN	MINIMUM
		MISC	MISCELLANEOUS
BO	BOARD	M.O.	MANSONRY OPENING
BLDG	BUILDING	MTD	MOUNTED
CAB	CABINET	N	NORTH
CB	CATCH BASIN	NEG	NEGATIVE
CG	CORNER GUARD	NIC	NOT IN CONTRACT
CJ	CONTROL JOINT	NO	NUMBER
CLG	CENTERLINE	NTS	NOT TO SCALE
CLR	CLEAR (CLEARANCE)		
CMU	CONCRETE MASONRY UNIT	O/C	ON CENTER(S)
COL	COLUMN	OC	ON CENTER(S)
CONC	CONCRETE	OD	OUTSIDE DIAMETER
CONST	CONSTRUCTION	OPN(C)	OPENING
CONT	CONTINUOUS	OPP	OPPOSITE
CPT	CARPET		
CSWK	CASEWORK	PL	PLATE or PROPERTY LINE
CT	CERAMIC TILE	PLAM	PLASTIC LAMINATE
CTR	CENTERLINE	PLYWD	PLYWOOD
		PML	PANEL
DBL	DOUBLE	PT(D)	PAINT(ED)
DF	DRINKING FOUNTAIN	PR	PAIR or PRINTER
DN	DOWN	PREFAB	PREFABRICATED
DS	DOWNSPOUT	PVC	POLYVINYL CHLORIDE
DWG	DRAWING		
O	DIAMETER	QT	QUARRY TILE
		QUAN	QUANTITY
EA	EACH		
EJ	EXPANSION JOINT	R	RADIUS
ELEC	ELECTRIC (AL)	RAD	RADIUS
ELEV	ELEVATION	RB	RUBBER (RESILENT) BASE
EPP	EPOXY PAINT	RCP	REFLECTED CEILING PLAN
EQ	EQUIPMENT	RD	ROOF DRAIN or ROAD
EQUIP	EQUIPMENT	RECEP	RECEPTICAL or RECEPTION
EWC	ELECTRIC WATER COOLER	RECIRC	RECIRCULATION
EXIST	EXISTING	REF	REFERENCE
EX or (E)	EXISTING	REFR	REFRIGERATOR
EXT	EXTERIOR	REQ	REQUIRE(MENT), (MENTS)
		RESIL	RESILIENT
FD	FLOOR DRAIN	REV	REVISION
FDC	FIRE DEPARTMENT CONNECTION	RM	ROOM
FDNT	FOUNDATION	RND	ROUND
FE	FIRE EXTINGUISHER	R.O.	ROUGH OPENING
FEC	FIRE EXTINGUISHER CABINET	R.O.	ROUGH OPENING
FH	FIRE HYDRANT	SC	SOLID CORE
FHC	FIRE HOSE CABINET	SCHED	SCHEDULE
FIN	FINISH	SECT	SECTION
FLR	FLOOR	SF	SQUARE FOOT
FLUOR	FLUORESCENT	SH	SHEET
FT	FOOT or FEET	SIM	SIMILAR
FTG	FOOTING	SPEC	SPECIFICATION
FV	FIELD VERIFY	SS	STAINLESS STEEL
		STD	STANDARD
GA	GAUGE	STL	STEEL
GALV	GALVANIZED	STRUCT	STRUCTURAL (RE)
GB	GYPSUM BOARD	SV	SHEET VINYL
GL	GLASS or GLAZING or GLAZED		
GRND	GROUND	TEMP	TEMPERATURE or TEMPORARY
GYP	GYPSUM	T & G	TONGUE & GROOVE
		THK	THICK(NESS)
HB	HOSE BIB	THRU	THROUGH
HT	HEIGHT	TOS	TOP OF STEEL
HM	HOLLOW METAL	TV	TELEVISION
HR	HOUR	TYP	TYPICAL
HTR	HEATER		
		UL	UNDERWRITER'S LABORATORY
ID	INSIDE DIAMETER	UNO	UNLESS NOTED OTHERWISE
IN	INCH	VCT	VINYL COMPOSITION TILE
INCAND	INCANDESCENT	VENT	VENTILATION
INSUL	INSULATION		
		W/	WITH
JT	JOINT	WB	WHITE BOARD or WOOD BASE
LAM	LAMINATE	WD	WOOD
LAV	LAVATORY	W/O	WITHOUT
LB(S)	LAG BOLT(S) or POUNDS	WP	WALL PROTECTION

Symbols

	ACOUSTIC CEILING PANEL		DETAIL DESIGNATION
	ASPHALTIC PAVING		DETAIL NUMBER - TYP
	BATT INSULATION		SHEET NUMBER - TYP
	BRICK MASONRY		DESIGNATES AREA DETAILED
	CONCRETE		INTERIOR ELEVATION
	GRAVEL		DETAIL NUMBER - TYP
	GYPSUM BOARD		DESIGNATES DIRECTION OF ELEVATION - TYP
	PLYWOOD		SHEET NUMBER - TYP
	RIGID INSULATION		DOOR NUMBER DESIGNATION
	WOOD - FINISH		LETTER INDICATES DOOR WITHIN ROOM
	WOOD - ROUGH		DOOR NUMBER
	WINDOW TYPE		KEYNOTE DESIGNATION
	FLOOR LEVEL		REVISION DELTA AND CLOUD
	REVISION IDENTIFICATION		REVISED AREA CLOUD
	WALL TYPE		WALL TYPE REFERENCE
	WALL		

Project Team

OWNER REPRESENTATIVES:

Kaiser Permanente

National Facilities Services
500 NE Multnomah Suite, 12th Floor
Portland, Oregon 97232

CONTACT: Nichole Olsrud, Project Manager
Email: nichole.m.olsrud@kp.org
Phone: (503) 983-0723

ARCHITECT:

jrj Architects, llc

15455 NW Greenbrier Parkway, Suite 260
Beaverton, Oregon 97206
Phone: (503) 690-1779

CONTACT: Jason Mullavey, Project Architect
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Flavius Budisan, Job Captain
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KPFF

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Phone: (503) 227-3251

CONTACT: Matt Johnson
Email: matt.johnson@kpff.com

CONTACT: Andrew Chung
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PAE Engineers

522 SW 5th Ave, Suite 1500
Portland, Oregon 97204
Phone: (503) 226-2921

CONTACT: Michelle Johnson
Email: Michelle.Johnson@pae-engineers.com

CONTACT: Kyle Lindsley
Email: kyle.lindsley@pae-engineers.com

CONTRACTOR:

Howard S. Wright

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CONTACT: Justin Hannan, Project Manager
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Phone: (503) 220-0895

Chris Powell, Asst Superintendent
Email: powellc@hswc.com
Cell: 541-600-7442

Project Information

PROJECT ADDRESS:

Kaiser Permanente - North Lancaster Medical Office
2400 Lancaster Drive NE
Salem, OR 97305

BUILDING DATA:

NUMBER OF STORIES: 1 Level

BUILDING CONSTRUCTION TYPE: V-A (FULLY SPRINKLERED)

BUILDING OCCUPANCY TYPE: B
(NO CHANGE IN OCCUPANCY AS RESULT OF PROJECT)

PROJECT AREA: APPROX. 3,821 SQ.FT.

Applicable Codes:

2022 Oregon Structural Specialty Code
(Based on the 2021 International Building Code)

2022 Oregon Fire Code
(Based on the 2021 IFC and adopted by the State Fire Marshall)

2022 Oregon Mechanical Specialty Code
(Based on the 2021 International Mechanical Code & International Fuel Gas Code)

2021 Oregon Zero Energy Ready Commercial Code
(Based on the 2019 International Energy Conservation Code & ASHRAE Standard 90.1)

2021 Oregon Plumbing Specialty Code
(Based on the 2021 Uniform Plumbing Code)

2021 Oregon Electrical Specialty Code
(Based on the 2020 NFPA 70, National Electrical Code)

2009 ICC/ANSI A117.1 Accessible & Usable Building & Facilities
National Fire Protection Association (NFPA) Standards

City of Salem Development Code

Drawing Sheet List

General

A0.0-7 Cover Sheet

Civil

C0.0 General Notes
C0.1 Overall Composite Site Plan
C1.0 Existing Conditions
C1.1 Demolition Plan
C2.0 Site Plan
C2.1 Horizontal Control Plan
C3.0 Grading & Drainage Plan
C4.0 Details
C4.1 Details
C5.0 Specifications
C5.1 Specifications
C5.2 Specifications

Landscape

L1.01 Planting Study

Architectural

A0.1-7 Scoping Plan
A0.2-7 Demolition Plans
A0.3-7 New Enlarged Plans

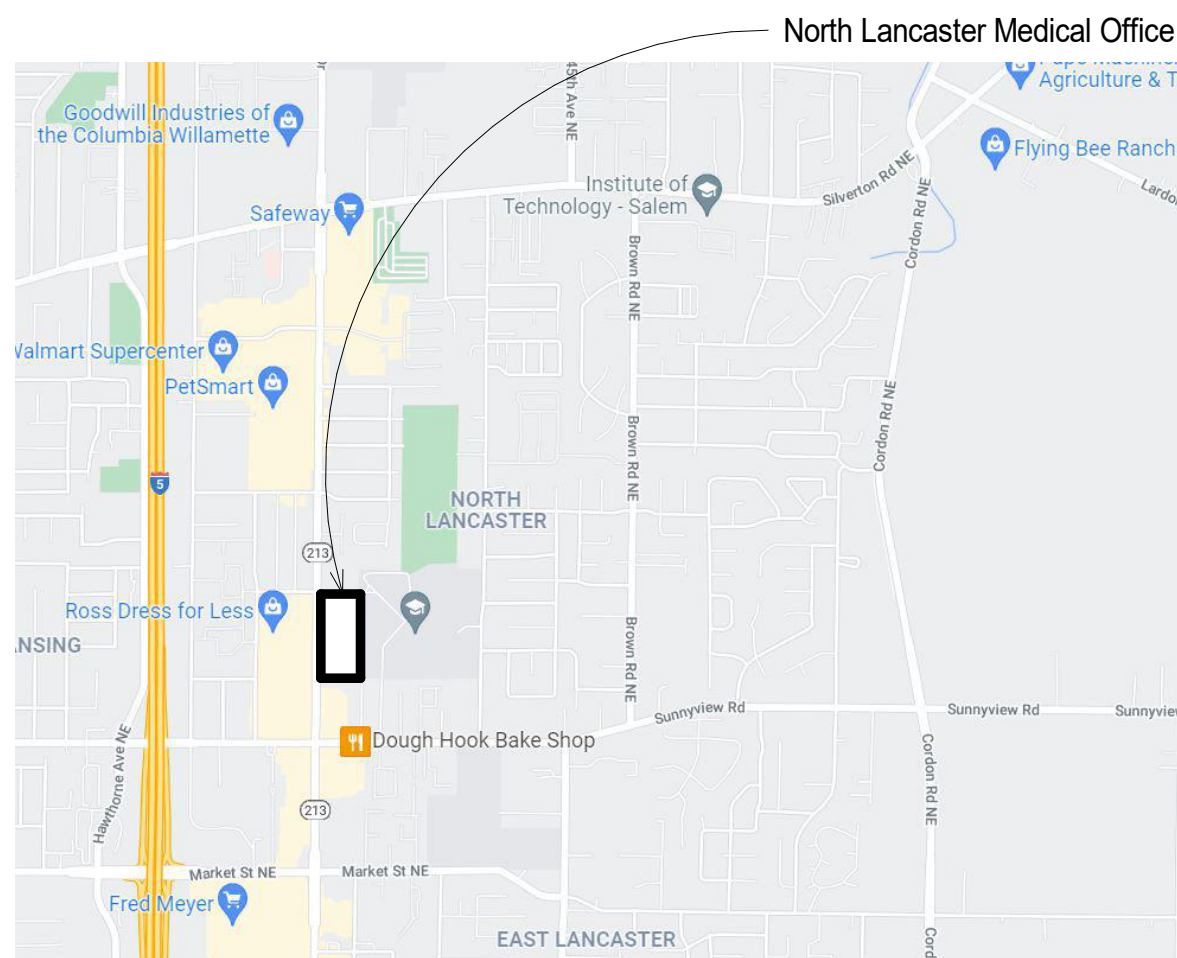
Electrical

E001 Symbols, Legends & Abbreviations - Electrical
E010 Site Plan - Electrical

Scope Description

Project scope includes the extension of a concrete sidewalk on East side of building alongside diagonal parking spaces, a large reserved parking space, and exterior lighting. The project is current to KP standards and operational guidelines within the **North Lancaster Medical Office Building**.

Vicinity Map



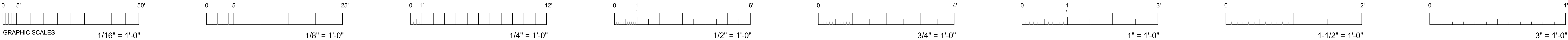
Facility
North Lancaster Medical Office
Salem, Oregon

Project
Site Improvements

Sheet Title
Cover Sheet

Building ID: NLR	Floor Levels: Site	Section: -
Scale	12" = 1'-0"	kP Project No. CAP027382
Drwn By	Author	Permit No. -
Chkd By	Checker	Sheet
Issue Date	April 15, 2024	A0.0-7
jrj Project No.	202010-07	

File: N:\c\p\2023\2200245-KP-Lancaster-MD\CAD\PL\DT\22245-C00.GENERAL NOTES.dwg TAB: C00
Plotted: 4/11/24 at 2:08pm By: jrchung



GENERAL NOTES

- SURVEY PROVIDED BY AKS ENGINEERING & FORESTRY LLC, DATED OCTOBER 2023. SEE SHEET C1.0 FOR HORIZONTAL AND VERTICAL DATUM INFORMATION. CONTACT AKS ENGINEERING & FORESTRY FOR CONTROL POINT INFORMATION.

AKS ENGINEERING & FORESTRY
3700 RIVER RD N, STE 1
KEIZER, OR 97303
- CONSTRUCTION LAYOUT (ALL ACTUAL LINES AND GRADES) SHALL BE STAKED BY A PROFESSIONAL SURVEYOR, REGISTERED IN THE STATE OF OREGON, BASED ON COORDINATES, DIMENSIONS, BEARINGS, AND ELEVATIONS, AS SHOWN, ON THE PLANS.
- PROJECT CONTROL SHALL BE FIELD VERIFIED AND CHECKED FOR RELATIVE HORIZONTAL POSITION PRIOR TO BEGINNING CONSTRUCTION LAYOUT. CONTACT AKS FOR PROJECT CONTROL INFORMATION.
- PROJECT CONTROL SHALL BE FIELD VERIFIED AND CHECKED FOR RELATIVE VERTICAL POSITION BASED ON THE BENCHMARK STATED HEREON, PRIOR TO BEGINNING CONSTRUCTION LAYOUT.
- WHEN DIMENSIONS AND COORDINATE LOCATIONS ARE REPRESENTED - DIMENSIONS SHALL HOLD OVER COORDINATE LOCATION. NOTIFY THE CIVIL ENGINEER OF RECORD IMMEDIATELY UPON DISCOVERY.
- BUILDING SETBACK DIMENSIONS FROM PROPERTY LINES SHALL HOLD OVER ALL OTHER CALLOUTS. PROPERTY LINES AND ASSOCIATED BUILDING SETBACKS SHALL BE VERIFIED PRIOR TO 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 2021 OREGON STANDARD SPECIFICATIONS FOR CONSTRUCTION, THE 2021 OREGON PLUMBING SPECIALTY CODE AND REQUIREMENTS OF THE CITY OF SALEM.
- THE COMPLETED INSTALLATION SHALL CONFORM TO ALL APPLICABLE FEDERAL, STATE, AND LOCAL CODES, ORDINANCES AND REGULATIONS. ALL PERMITS, LICENSES AND INSPECTIONS REQUIRED BY THE GOVERNING AUTHORITIES FOR THE EXECUTION AND COMPLETION OF WORK SHALL BE SECURED BY THE CONTRACTOR PRIOR TO COMMENCING CONSTRUCTION.
- 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). (MODIFY AS NECESSARY FOR OUT OF STATE WORK.) 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 SALEM 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 LADEN 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.
- CONTRACTOR SHALL MAINTAIN ALL UTILITIES TO BLDG AT ALL TIMES DURING CONSTRUCTION.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING AND SCHEDULING ALL WORK WITH THE OWNER.
- NOTIFY CITY INSPECTOR 72 HOURS BEFORE STARTING WORK. A PRECONSTRUCTION MEETING WITH THE OWNER, THE OWNER'S ENGINEER, CONTRACTOR AND THE CITY REPRESENTATIVE SHALL BE REQUIRED

CONSTRUCTION NOTES

GENERAL

- ACTUAL LINES AND GRADES SHALL BE STAKED BY A PROFESSIONAL SURVEYOR, REGISTERED IN THE STATE OF OREGON, BASED ON DIMENSIONS, ELEVATIONS AND BEARINGS AS SHOWN ON THE PLANS.
- SUBGRADE AND TRENCH BACKFILL SHALL BE COMPACTED TO AT LEAST 95% OF THE MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D-698. FLOODING OR JETTING THE BACKFILLED TRENCHES WITH WATER IS NOT PERMITTED.
- SPECIAL INSPECTION REQUIRED FOR ALL COMPACTION TESTING.

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.
- SAWCUT 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 COORDINATE WITH PRIVATE UTILITY COMPANIES FOR THE INSTALLATION OF OR ADJUSTMENT TO GAS, ELECTRICAL, POWER AND TELEPHONE SERVICE.

EARTHWORKS

- CONTRACTOR SHALL PREVENT SEDIMENTS AND SEDIMENT LADEN WATER FROM ENTERING THE STORM DRAINAGE SYSTEM.
- TRENCH BEDDING AND BACKFILL SHALL BE AS SHOWN ON THE PIPE BEDDING AND BACKFILL DETAIL, THE PROJECT SPECIFICATIONS AND AS REQUIRED IN THE SOILS REPORT. FLOODING OR JETTING THE BACKFILLED TRENCHES WITH WATER WILL NOT BE PERMITTED.

PAVING

- SEE CIVIL PLANS PLANS FOR SIDEWALK FINISHING AND SCORING PATTERNS.

MATERIAL NOTES

- GENERAL: MATERIALS SHALL BE NEW. THE USE OF MANUFACTURER'S NAMES, MODELS, AND NUMBERS IS INTENDED TO ESTABLISH STYLE, QUALITY, APPEARANCE, AND USEFULNESS. PROPOSED SUBSTITUTIONS WILL REQUIRE WRITTEN APPROVAL FROM ARCHITECT PRIOR TO INSTALLATION.

PROJECT CONTACTS

OWNER:
KAISER PERMANENTE
NATIONAL FACILITY SERVICES
500 NE MULTNOMAH STREET
12TH FLOOR PORTLAND, OREGON 97232
CONTACT: NICHOLE OLSRUD, PROJECT MANAGER
EMAIL: nichole.m.olsrud@kp.org
TEL: (503)983-0723

ARCHITECT:
JRJ ARCHITECTS, LLC
15455 NW GREENBRIER PARKWAY, SUITE 260
BEAVERTON, OREGON 97006
TEL: (503)690-1779
CONTACT: JASON MULLAVEY, PROJECT ARCHITECT
EMAIL: jmullavey@jrjarch.com

CIVIL ENGINEER/PROJECT MANAGER:
KPFF CONSULTING ENGINEERS
111 SW FIFTH AVENUE, SUITE 2600
PORTLAND, OREGON 97204
TEL: 503-542-3872
CONTACT: ANDREW CHUNG, PE

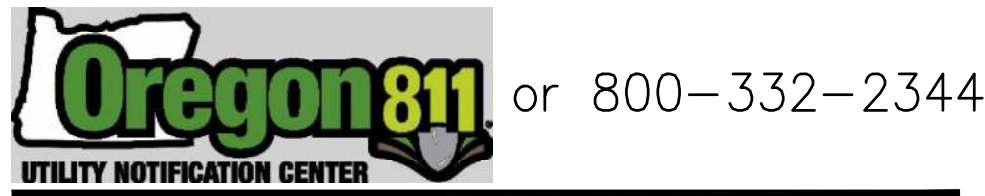
SHEET INDEX

Sheet Number	Sheet Title
C0.0	GENERAL NOTES
C0.1	OVERALL COMPOSITE SITE PLAN
C1.0	EXISTING CONDITIONS
C1.1	DEMOLITION AND EROSION CONTROL PLAN
C2.0	SITE PLAN
C2.1	HORIZONTAL CONTROL PLAN
C3.0	GRADING AND DRAINAGE PLAN
C4.0	DETAILS
C4.1	DETAILS
C5.0	SPECIFICATIONS
C5.1	SPECIFICATIONS
C5.2	SPECIFICATIONS

NOTICE TO EXCAVATORS:
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(NOTE: THE TELEPHONE NUMBER FOR THE OREGON UTILITY NOTIFICATION CENTER IS (503)-232-1987).

POTENTIAL UNDERGROUND FACILITY OWNERS

Call before you dig.



EMERGENCY TELEPHONE NUMBERS

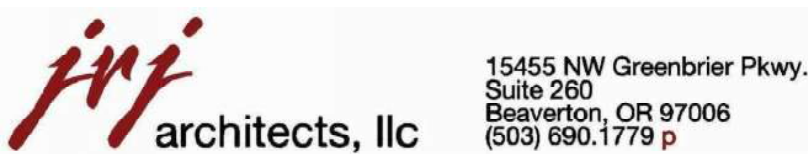
CENTURYLINK	1-800-573-1311
COMCAST	1-800-391-3000
NW NATURAL GAS	503-226-4211 x4313
PACIFICORP	877-508-5088
PGE	503-464-7777
CITY OF SALEM WATER BUREAU	503-588-6211
VERIZON	1-800-VERIZON

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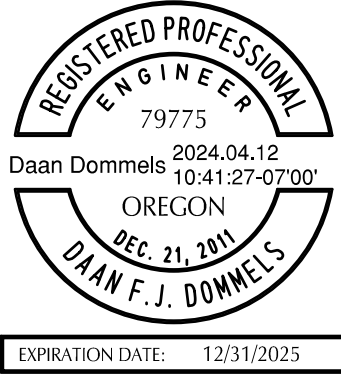
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Portland, OR 97204
O: 503.542.3860
F: 503.274.4681
www.kpff.com

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Project Architect Approval:

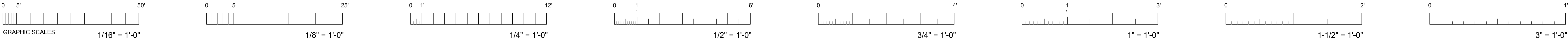
Architect/Engineer of Record:



Facility
KAISER NORTH LANCASTER
2400 LANCASTER DR NE,
SALEM, OR 97305
Project
Site Improvements

Sheet Title
GENERAL NOTES

Building ID: NLR	Floor Levels: Site	Section: -
Scale	As Indicated	KP Project No. CAP027382
Drawn By	PT	Permit No. -
Chkd By	AC	Sheet
Issue Date	April 15th, 2024	C0.0
jrj Project No.	202010-07	



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SHEET NOTES

- THE DETAIL NUMBERS SHOWN IN THE DETAIL CALLOUT REFER TO THE ENLARGEMENT NUMBER ON EACH SHEET COMPOSED OF ENLARGEMENTS.
- CX.X IS A PLACEHOLDER SHEET NUMBER ONLY. REFER TO SHEETS C1.1, C2.0, C2.1, AND C3.0 FOR CORRESPONDING ENLARGEMENTS.



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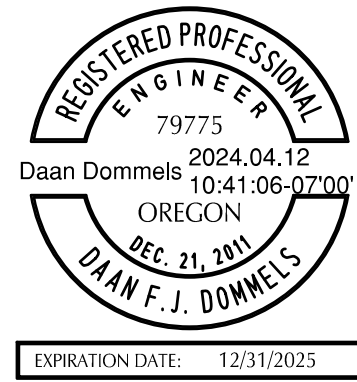
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Architect/Engineer of Record:

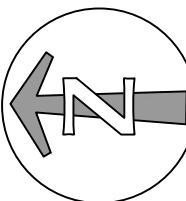
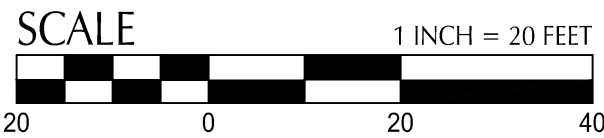


Facility
KAISER NORTH LANCASTER
2400 LANCASTER DR NE,
SALEM, OR 97305
Project
Site Improvements

Sheet Title
OVERALL COMPOSITE SITE
PLAN

Building ID: NLR	Floor Levels: Site	Section: -
Scale	As Indicated	KP Project No. CAP027382
Drwn By	PT	Permit No. -
Chkd By	AC	Sheet
Issue Date	April 15th, 2024	
jrj Project No.	202010-07	

C0.1





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kpff

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F: 503.274.4681
www.kpff.com



AKS
ENGINEERING & FORESTRY, LLC
2700 DIVER RD N. STE 1
KEIZER, OR 97031
503.400.6028
WWW.AKS-ENG.COM

ENGINEERING - SURVEYING - NATURAL RESOURCES
FORESTRY - PLANNING - LANDSCAPE ARCHITECTURE

OREGON
MARION COUNTY TAX MAP 07 2W 18C3

SALEM
TAX LOT 601

KP 2400 LANCASTER

EXISTING CONDITIONS
PLAN

DESIGNED BY:

DRAWN BY: AC

MANAGED BY: JS

CHECKED BY: BH

DATE: 10/18/2023

REGISTERED
PROFESSIONAL
LAND SURVEYOR

DIGITALLY SIGNED
10/18/2023 4:46:07 PM

OREGON
NOVEMBER 9, 2021
JOSEPH F. SULLIVAN
8645815

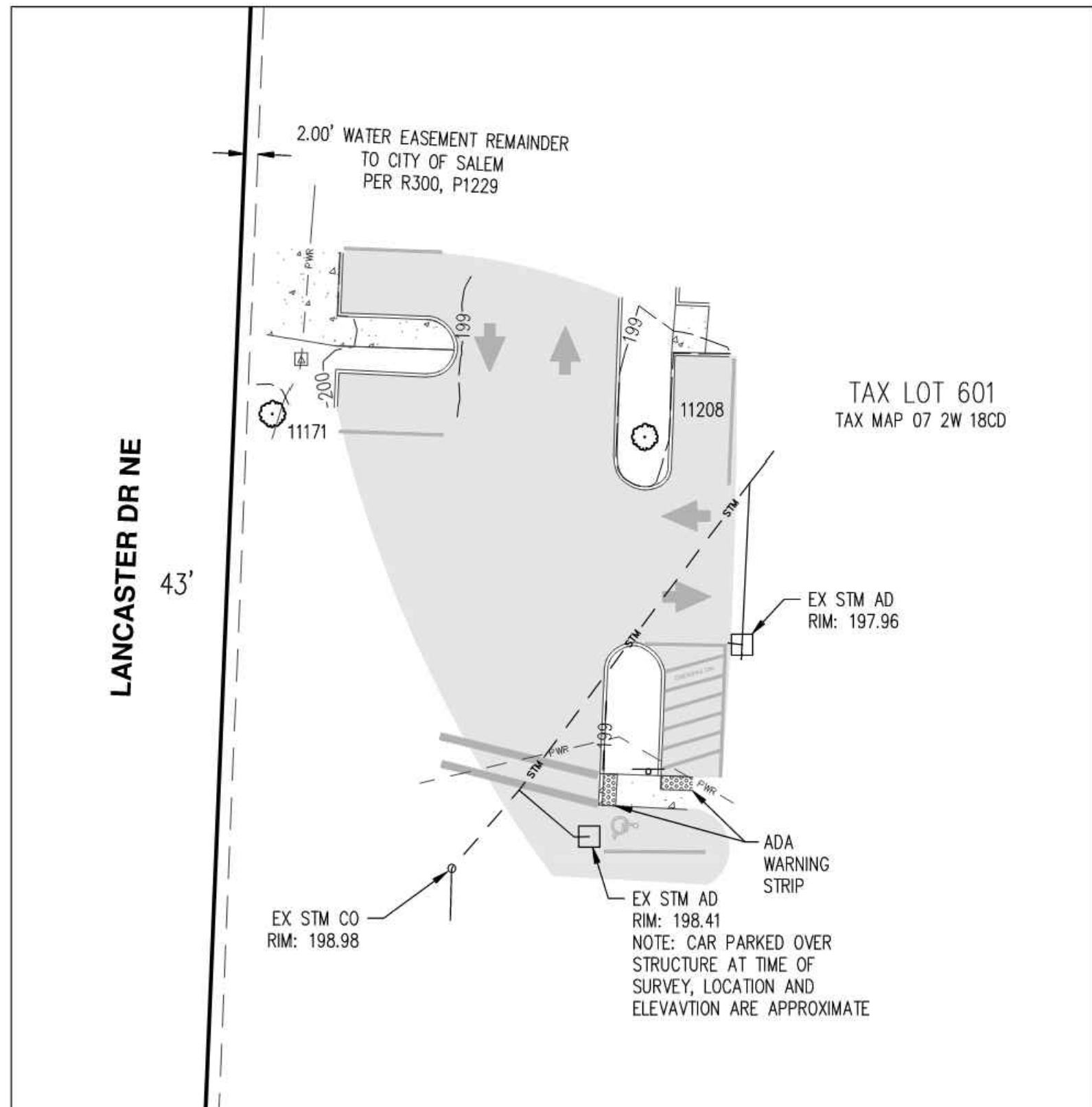
RENEW: 6/30/2024

REVISIONS

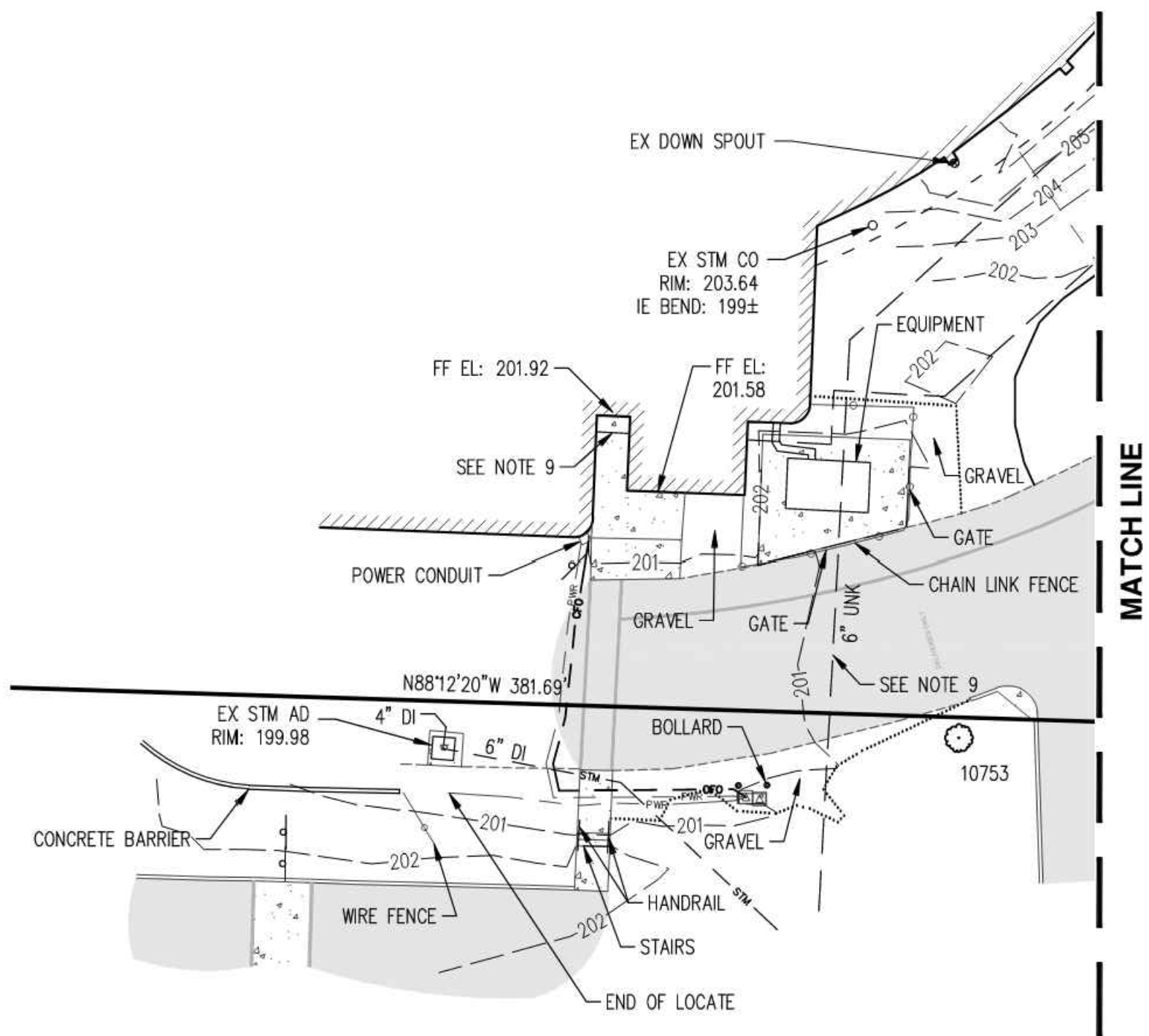
JOB NUMBER
10386

SHEET

C002

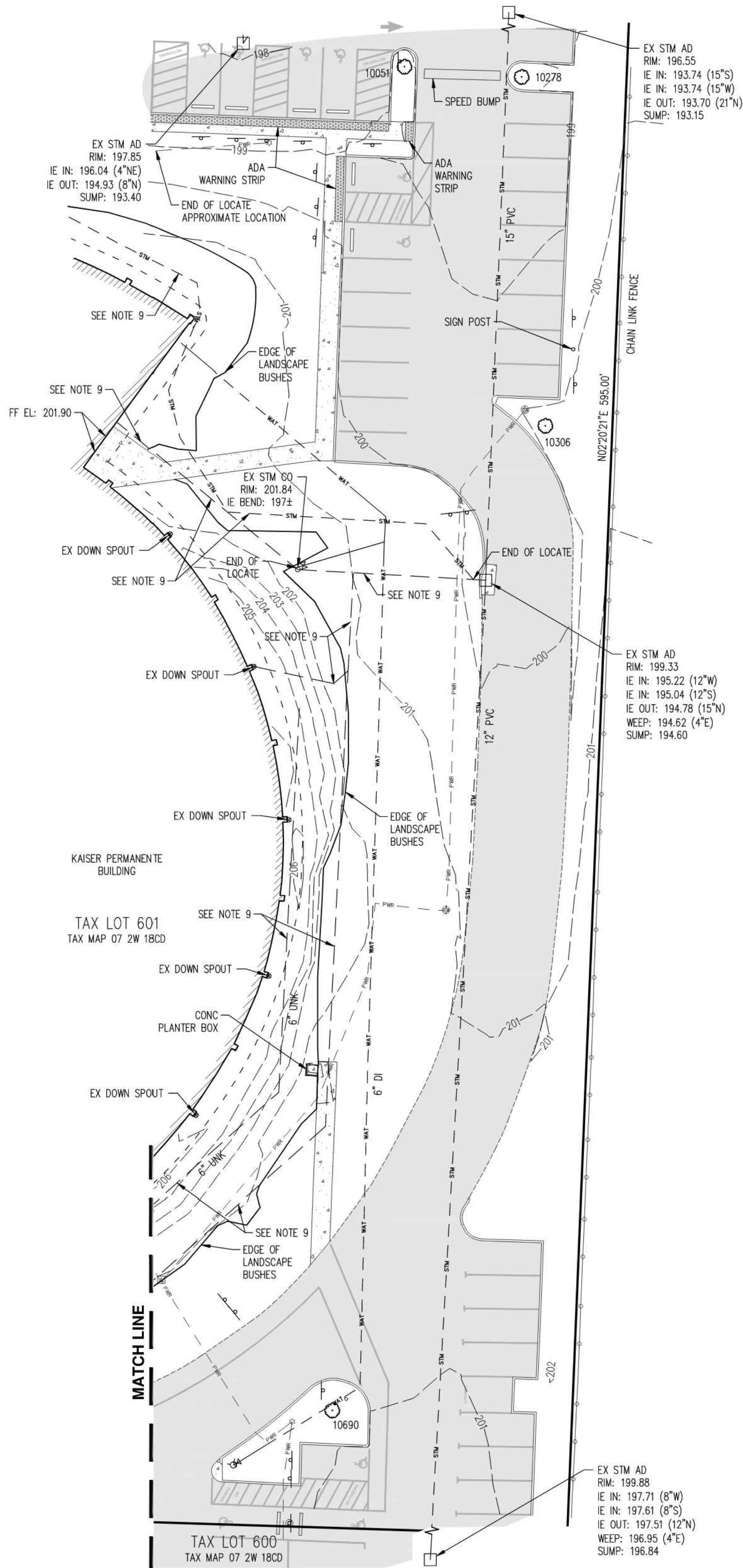


WINDOW A



MATCH LINE

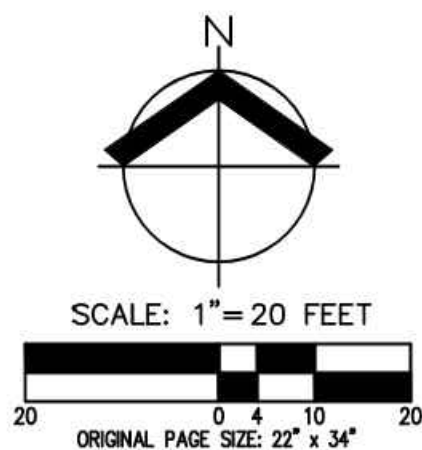
SEE WINDOW A



NOTES:

- UTILITIES SHOWN ARE BASED ON UNDERGROUND UTILITY LOCATE MARKINGS PER MARK IT OUT LLC. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND LOCATES REPRESENT THE ONLY UTILITIES IN THE AREA. CONTRACTORS ARE RESPONSIBLE FOR VERIFYING ALL EXISTING CONDITIONS PRIOR TO BEGINNING CONSTRUCTION.
- FIELD WORK WAS CONDUCTED JULY, 2023. WITH ADDITIONAL FIELD WORK CONDUCTED OCTOBER, 2023.
- HORIZONTAL DATUM: A LOCAL DATUM PLANE DERIVED FROM STATE PLANE OREGON NORTH 3601 NAD83(2011) EPOCH 2010.00 BY MULTIPLYING BY A PROJECT MEAN GROUND COMBINED SCALE FACTOR OF 1.0001047598 AT A CENTRAL PROJECT POINT WITH INTERNATIONAL FEET STATE PLANE GRID COORDINATES N:480511.740 E:7559686.566 AND A MERIDIAN CONVERGENCE ANGLE OF -1'45'37.2". STATE PLANE COORDINATES WERE DERIVED FROM GPS OBSERVATIONS USING THE TRIMBLE VRS NOW NETWORK. DISTANCES SHOWN ARE INTERNATIONAL FEET GROUND VALUES.
- VERTICAL DATUM: ELEVATIONS ARE BASED ON NGS BENCHMARK QE1447, LOCATED AT THE JUNCTION OF LANCASTER DRIVE AND WOLVERINE STREET, 105.0 FEET EAST OF THE CENTERLINE OF THE NORTHBOUND LANES OF THE DRIVE, 74.1 FEET WEST OF THE CENTER OF THE DRIVEWAY LEADING TO THE KAISER PERMANENTE MEDICAL OFFICE, 29.9 FEET SOUTH OF THE CENTER OF THE STREET, 3.3 FEET WEST OF A UTILITY POLE, AND 3.0 FT SOUTH OF THE SOUTH EDGE OF A SIDEWALK. ELEVATION = 202.94 FEET (NAVD88) THEN ADJUSTED TO NGVD29 WITH A VERTCON SHIFT OF -3.37 FEET, SETTING THE NGVD29 ELEVATION AT 199.57 FEET.
- CONTOUR INTERVAL IS 1.00 FOOT.
- THIS IS NOT A PROPERTY BOUNDARY SURVEY TO BE RECORDED WITH THE COUNTY SURVEYOR. BOUNDARIES MAY BE PRELIMINARY AND SHOULD BE CONFIRMED WITH THE STAMPING SURVEYOR PRIOR TO RELYING ON FOR DETAILED DESIGN OR CONSTRUCTION.
- BUILDING FOOTPRINTS ARE MEASURED TO SIDING UNLESS NOTED OTHERWISE. CONTACT SURVEYOR WITH QUESTIONS REGARDING BUILDING TIES.
- TREES WITH DIAMETER OF 6" AND GREATER ARE SHOWN. TREE DIAMETERS WERE MEASURED UTILIZING A DIAMETER TAPE AT BREAST HEIGHT. TREE INFORMATION IS SUBJECT TO CHANGE UPON ARBORIST INSPECTION.
- STORM LINES ARE APPROXIMATELY PLACED PER PETER KOLBERG & ASSOCIATES, P.C. PLUMBING SITE PLAN, SHEET P1.01, DATED 09/29/1998.

TREE TABLE		
TREE NUMBER	TYPE	DBH (IN.)
10051	DECIDUOUS	8
10278	DECIDUOUS	10
10306	DECIDUOUS	13
10690	DECIDUOUS	12
10753	DECIDUOUS	16
11171	DECIDUOUS	16
11208	DECIDUOUS	9



AKS DRAWING FILE: 10386COND-ENG | LAYOUT | LAYOUT

File: N:\c\p\2023\22020245-KP-Lancaster-MDN\CAD\PL\DTA\22245-CLD-EX.swg TAB: C10
Plotted: 4/11/24 at 1:45pm By: HCRUNG

100% Construction Documents

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Project Architect Approval:

Architect/Engineer of Record:

FOR
INFORMATION
ONLY

Facility
KAISER NORTH LANCASTER
2400 LANCASTER DR NE,
SALEM, OR 97305
Project
Site Improvements

Sheet Title
EXISTING CONDITIONS

Building ID: NLR	Floor Levels: Site	Section: -
Scale	As Indicated	KP Project No. CAP027382
Drawn By	PT	Permit No. -
Chkd By	AC	Sheet
Issue Date	April 15th, 2024	C1.0
jjj Project No.	202010-07	



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EROSION CONTROL NOTES

1. APPROVAL OF THIS EROSION/SEDIMENTATION CONTROL (ESC) PLAN DOES NOT CONSTITUTE AN APPROVAL OF PERMANENT ROAD OR DRAINAGE DESIGN (E.G., SIZE AND LOCATION OF ROADS, RESTRICTORS, CHANNELS, RETENTION FACILITIES, UTILITIES, ETC.).
2. THE IMPLEMENTATION OF THESE ESC PLANS AND THE CONSTRUCTION, MAINTENANCE, REPLACEMENT, AND UPGRADING OF THESE ESC FACILITIES IS THE RESPONSIBILITY OF THE CONTRACTOR UNTIL ALL CONSTRUCTION IS COMPLETED AND APPROVED AND PERMANENT VEGETATION/LANDSCAPING IS ESTABLISHED.
3. THE BOUNDARIES OF THE CLEARING LIMITS SHOWN ON THIS PLAN SHALL BE CLEARLY FLAGGED IN THE FIELD PRIOR TO CONSTRUCTION. DURING THE CONSTRUCTION PERIOD, NO DISTURBANCE BEYOND THE FLAGGED CLEARING LIMITS SHALL BE PERMITTED. THE FLAGGING SHALL BE MAINTAINED BY THE CONTRACTOR FOR THE DURATION OF CONSTRUCTION.
4. THE ESC FACILITIES SHOWN ON THIS PLAN MUST BE CONSTRUCTED IN CONJUNCTION WITH ALL CLEARING AND GRADING ACTIVITIES, AND IN SUCH A MANNER AS TO ENSURE THAT SEDIMENT AND SEDIMENT LADEN WATER DO NOT ENTER THE DRAINAGE SYSTEM, ROADWAYS, OR VIOLATE APPLICABLE WATER STANDARDS.
5. THE ESC FACILITIES SHOWN ON THIS PLAN ARE THE MINIMUM REQUIREMENTS FOR ANTICIPATED SITE CONDITIONS. DURING THE CONSTRUCTION PERIOD, THESE ESC FACILITIES SHALL BE UPGRADED AS NEEDED FOR UNEXPECTED STORM EVENTS AND TO ENSURE THAT SEDIMENT AND SEDIMENT LADEN WATER DO NOT LEAVE THE SITE.
6. THE ESC FACILITIES SHALL BE INSPECTED DAILY BY THE CONTRACTOR AND MAINTAINED AS NECESSARY TO ENSURE THEIR CONTINUED FUNCTIONING.
7. THE ESC FACILITIES ON INACTIVE SITES SHALL BE INSPECTED AND MAINTAINED A MINIMUM OF ONCE A MONTH OR WITHIN THE 24 HOURS FOLLOWING A STORM EVENT.
8. AT NO TIME SHALL MORE THAN ONE FOOT OF SEDIMENT BE ALLOWED TO ACCUMULATE WITHIN A TRAPPED CATCH BASIN. ALL CATCH BASINS AND CONVEYANCE LINES SHALL BE CLEANED PRIOR TO PAVING. THE CLEANING OPERATION SHALL NOT FLUSH SEDIMENT LADEN WATER INTO THE DOWNSTREAM SYSTEM.
9. STABILIZED CONSTRUCTION ENTRANCES SHALL BE INSTALLED AT THE BEGINNING OF CONSTRUCTION AND MAINTAINED FOR THE DURATION OF THE PROJECT. ADDITIONAL MEASURES MAY BE REQUIRED TO ENSURE THAT ALL PAVED AREAS ARE KEPT CLEAN FOR THE DURATION OF THE PROJECT.

EROSION CONTROL KEY NOTES

1. SEDIMENT FENCE PER DETAIL 2/C4.1.
2. CONSTRUCTION ENTRANCE, GRAVEL AS NECESSARY TO PREVENT DAMAGING SOIL PER DETAIL 3/C4.1.
3. INLET PROTECTION PER DETAIL 1/C4.1.
4. CONCRETE WASHOUT.
5. STRAW WATTLES.

SHEET NOTES

1. CONTRACTOR MAY STAGE WITHIN KAISER PROPERTY COORDINATE WITH OWNER FOR STAGING LIMITS.
2. REMOVE ALL SITE COMPONENTS AND RECYCLE COMPONENTS AS REQUIRED IN THE SPECIFICATIONS.
3. GENERAL DEMOLITION PERMIT SHALL BE SECURED BY THE CONTRACTOR.
4. ALL TRADE LICENSES AND PERMITS NECESSARY FOR THE PROCUREMENT AND COMPLETION OF THE WORK SHALL BE SECURED BY THE CONTRACTOR PRIOR TO COMMENCING DEMOLITION.
5. THE CONTRACTOR SHALL PRESERVE AND PROTECT FROM DAMAGE ALL EXISTING RIGHT-OF-WAY SURVEY MONUMENTATION DURING DEMOLITION. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING AND PAYING FOR THE REPLACEMENT BY A LICENSED SURVEYOR OF ANY DAMAGED OR REMOVED MONUMENTS.
6. PROTECT ALL ITEMS ON ADJACENT PROPERTIES AND IN THE RIGHT OF WAY INCLUDING BUT NOT LIMITED TO SIGNAL EQUIPMENT, PARKING METERS, SIDEWALKS, STREET TREES, STREET LIGHTS, CURBS, PAVEMENT AND SIGNS. CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORING ANY DAMAGED ITEMS TO ORIGINAL CONDITION.
7. PROTECT STRUCTURES, UTILITIES, SIDEWALKS, AND OTHER FACILITIES IMMEDIATELY ADJACENT TO EXCAVATIONS FROM DAMAGES CAUSED BY SETTLEMENT, LATERAL MOVEMENT, UNDERMINING, WASHOUT AND OTHER HAZARDS.
8. SAWCUT STRAIGHT LINES IN SIDEWALK, AS NECESSARY.
9. CONTRACTOR IS RESPONSIBLE TO CONTROL DUST AND MUD DURING THE DEMOLITION PERIOD, AND DURING TRANSPORTATION OF DEMOLITION DEBRIS. ALL STREET SURFACES OUTSIDE THE CONSTRUCTION ZONE MUST BE KEPT CLEAN.
10. ALL EXPOSED PORTIONS OF UNDERGROUND UTILITIES TO BE ABANDONED SHALL BE PLUGGED PER DETAIL 4/C4.1.

DEMOLITION KEY NOTES

20. SAWCUT LINE. SEE SHEET C2.1 FOR DIMENSIONAL LIMITS.
21. REMOVE CONCRETE CURB. SEE SHEET C2.1 FOR DIMENSIONAL LIMITS.
22. REMOVE ASPHALT PAVEMENT AND CRUSHED ROCK SUBGRADE.
23. REMOVE CATCH BASIN CONCRETE COLLAR. POUR NEW COLLAR WITH NEW PAVEMENT TO FACILITATE DRAINAGE TO THE CATCH BASIN.
24. REMOVE VEGETATION.
25. REMOVE FENCE.

PROTECTION KEY NOTES

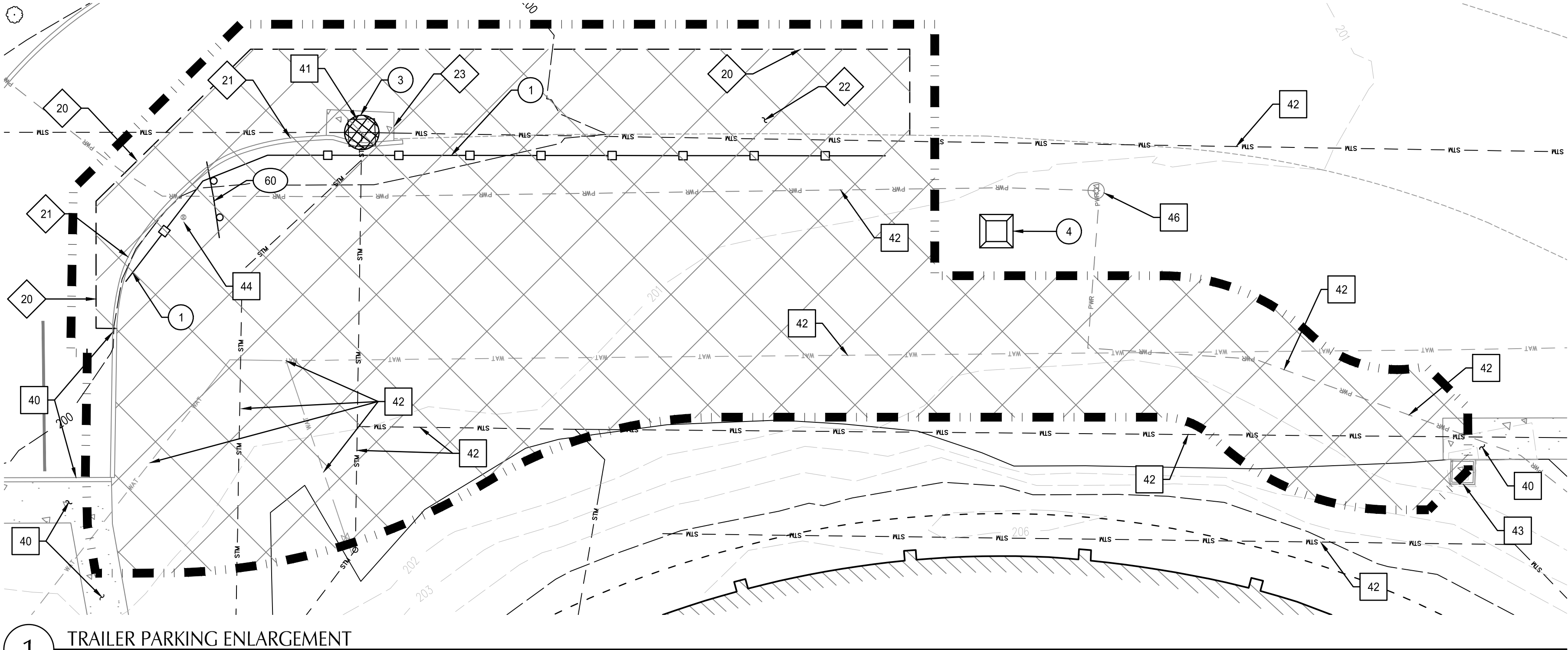
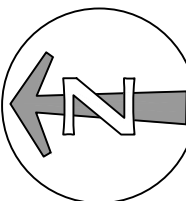
40. PROTECT CURB AND SIDEWALK.
41. PROTECT EXISTING CATCH BASIN. IF DAMAGED DURING CONSTRUCTION, REPLACE CATCH BASIN WITH SIMILAR PRODUCT.
42. PROTECT UNDERGROUND UTILITIES.
43. PROTECT CONCRETE PLANTER.
44. PROTECT IRRIGATION CONTROL VALVE. INSTALL NEW VEHICLE RATED LID STRUCTURE AND MATCH PROPOSED FINISH GRADE. PER DETAIL 15/C4.0.
45. RESTORE ALL STRIPING DAMAGED DURING CONSTRUCTION. SEE SITE PLAN FOR PROPOSED RESTRIPIING.
46. PROTECT LIGHT POLE AND POWER CONDUIT.
47. PROTECT UTILITY STRUCTURE AND CONDUIT.
48. PROTECT TACTILE WARNING.
49. PROTECT CONCRETE SIDEWALK AND CONCRETE STAIRS.
50. PROTECT FENCE.

SALVAGE KEY NOTES

60. SALVAGE EXISTING SIGN AND REINSTALL IN LANDSCAPE COORDINATE WITH OWNER.

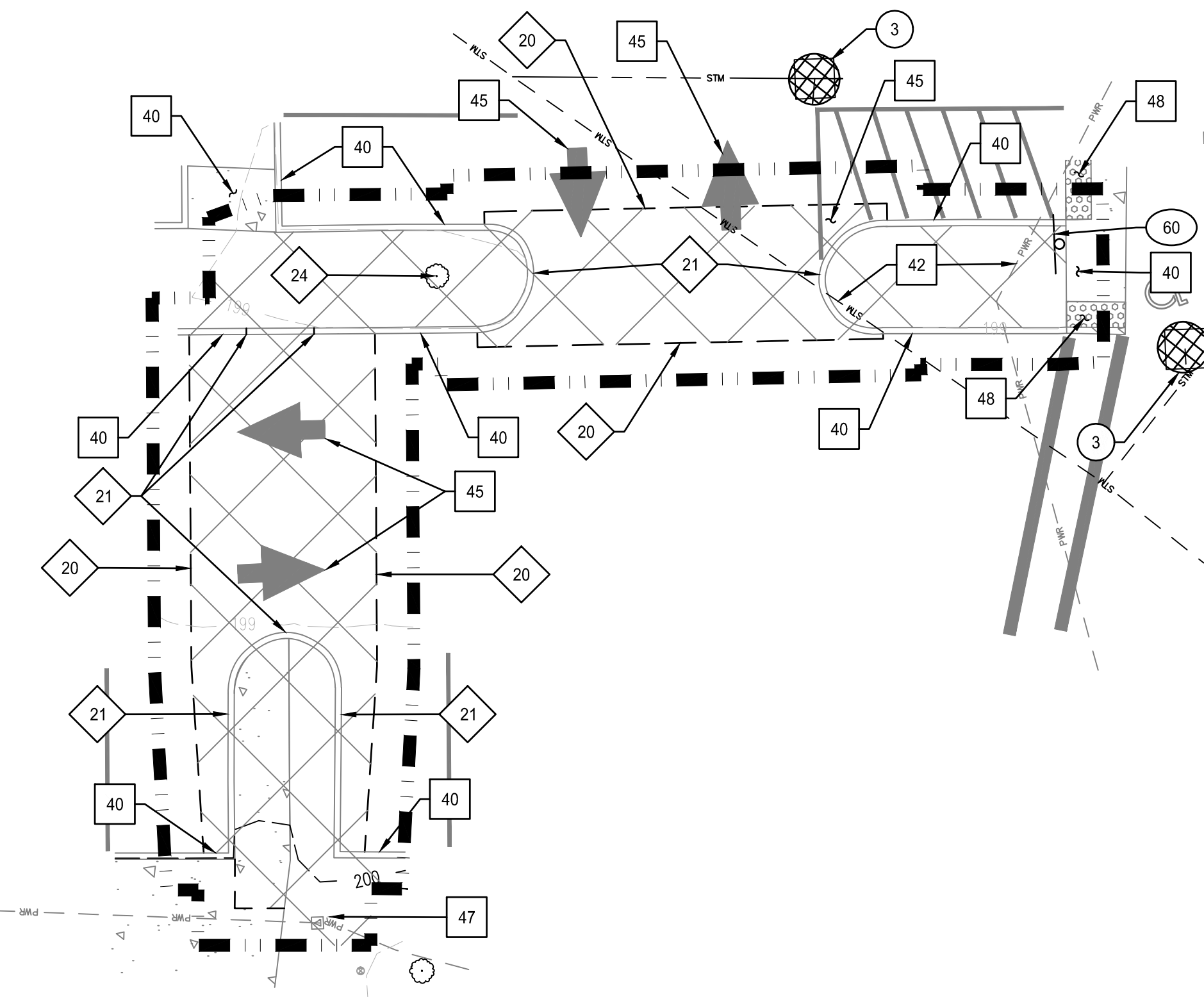
SHEET LEGEND

- PROPERTY LINE
- DEMOLITION/WORK LIMITS (SHOWN OFFSET FOR CLARITY). REMOVE ALL SURFACE FEATURES UNLESS OTHERWISE NECESSARY
- SAWCUT LINE
- SEDIMENT FENCE
- INLET PROTECTION
- CONCRETE WASHOUT



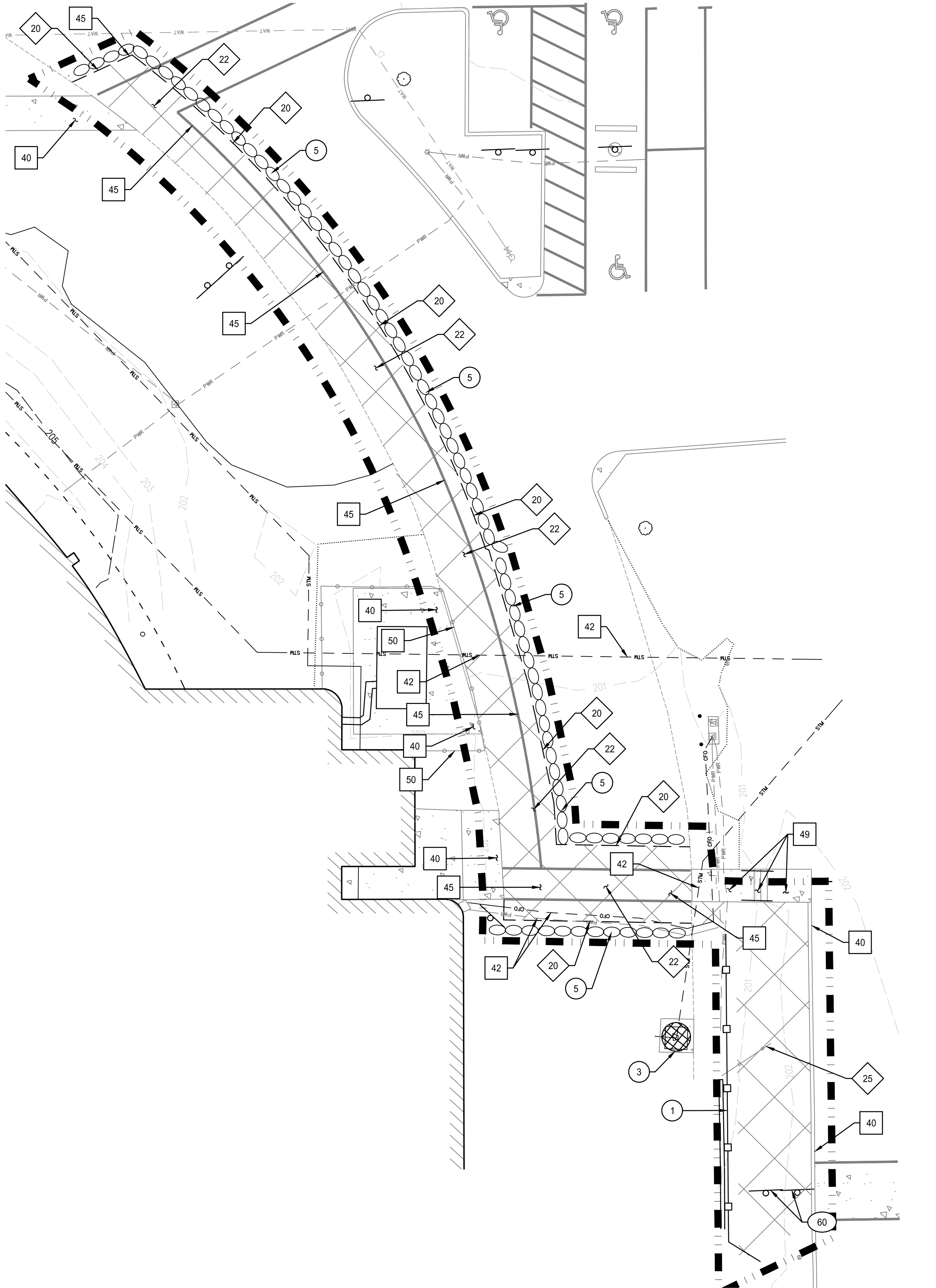
1 TRAILER PARKING ENLARGEMENT

SCALE: 1" = 10'



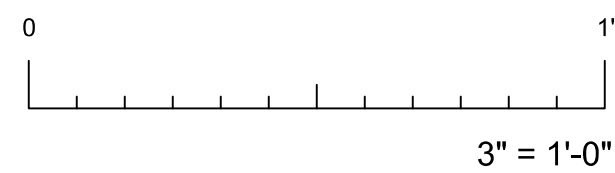
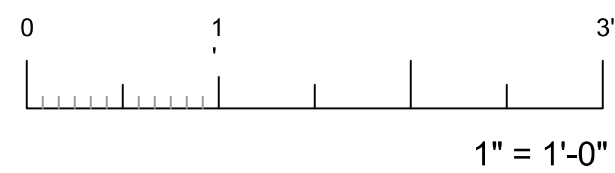
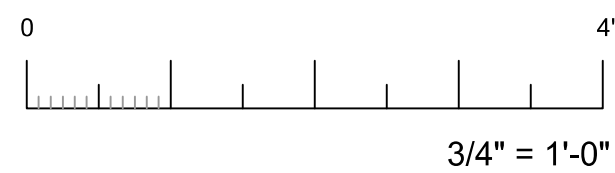
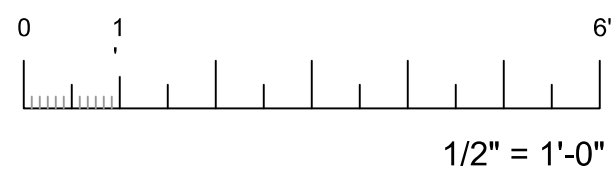
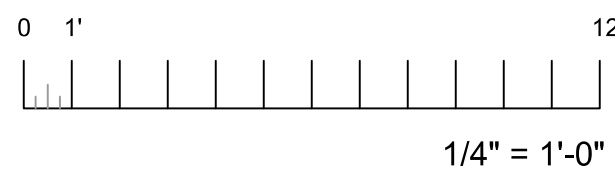
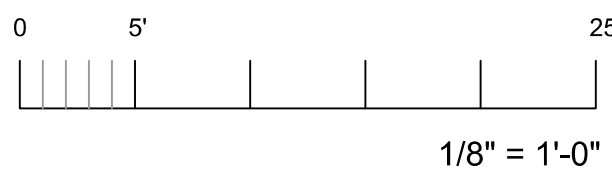
3 BUS STOP ACCESS ENLARGEMENT

SCALE: 1" = 10'

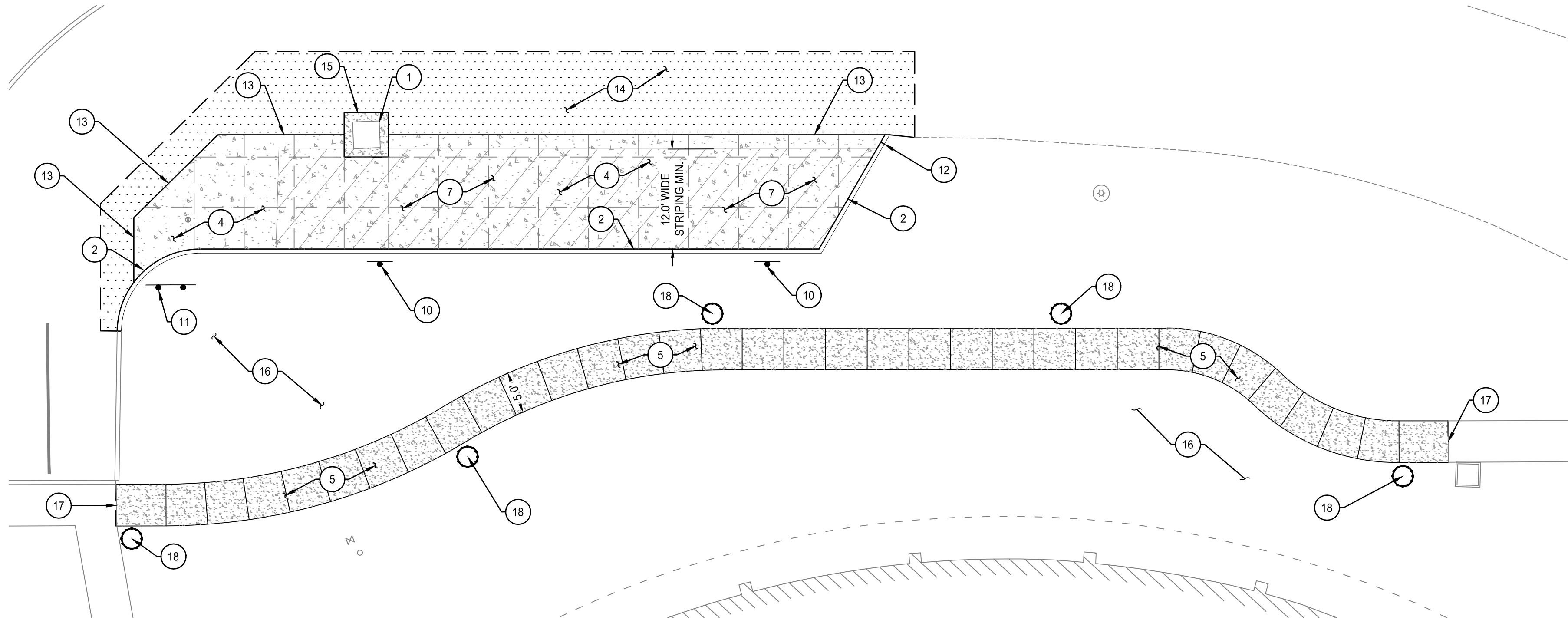


2 PEDESTRIAN WALKWAY ENLARGEMENT

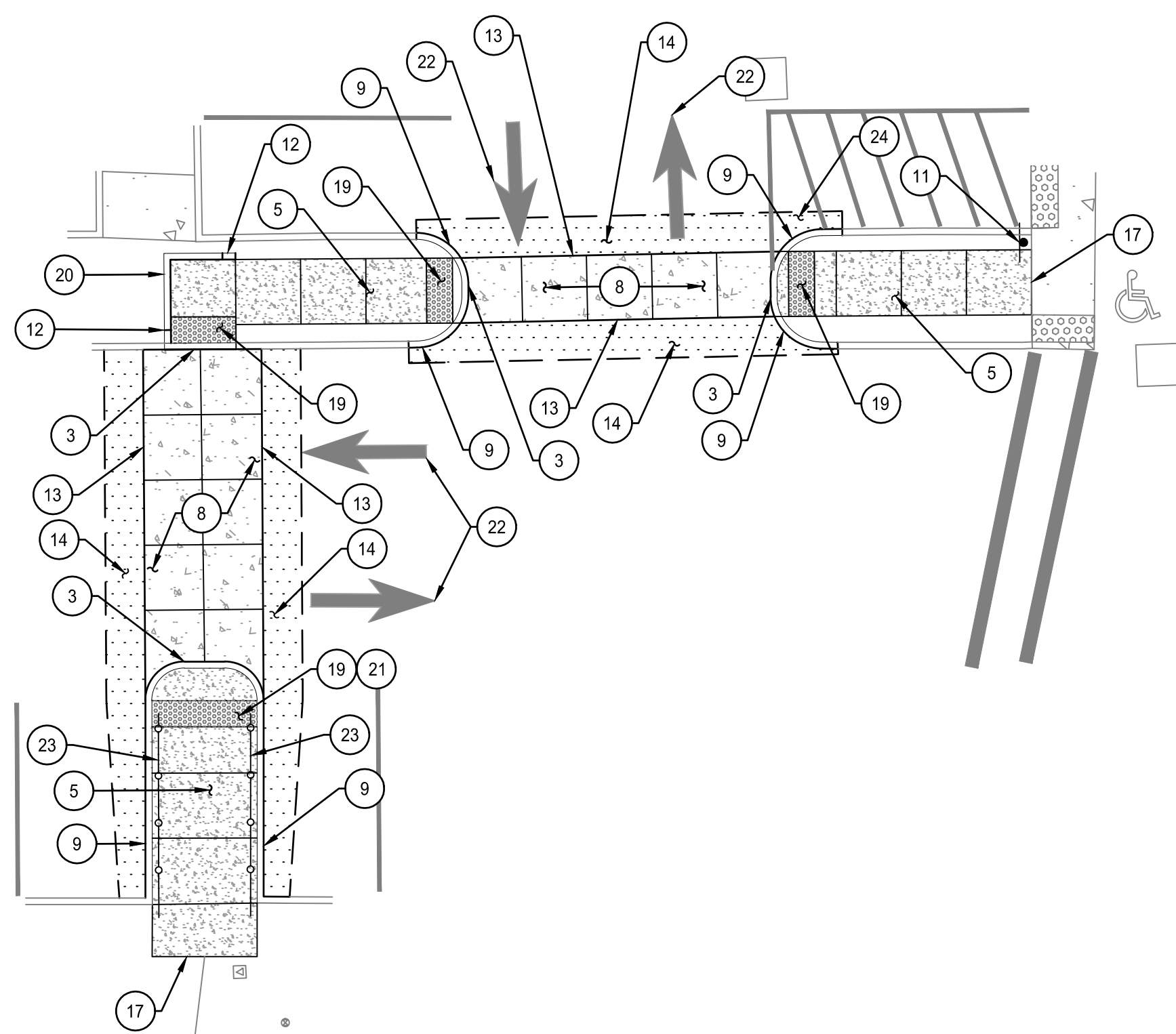
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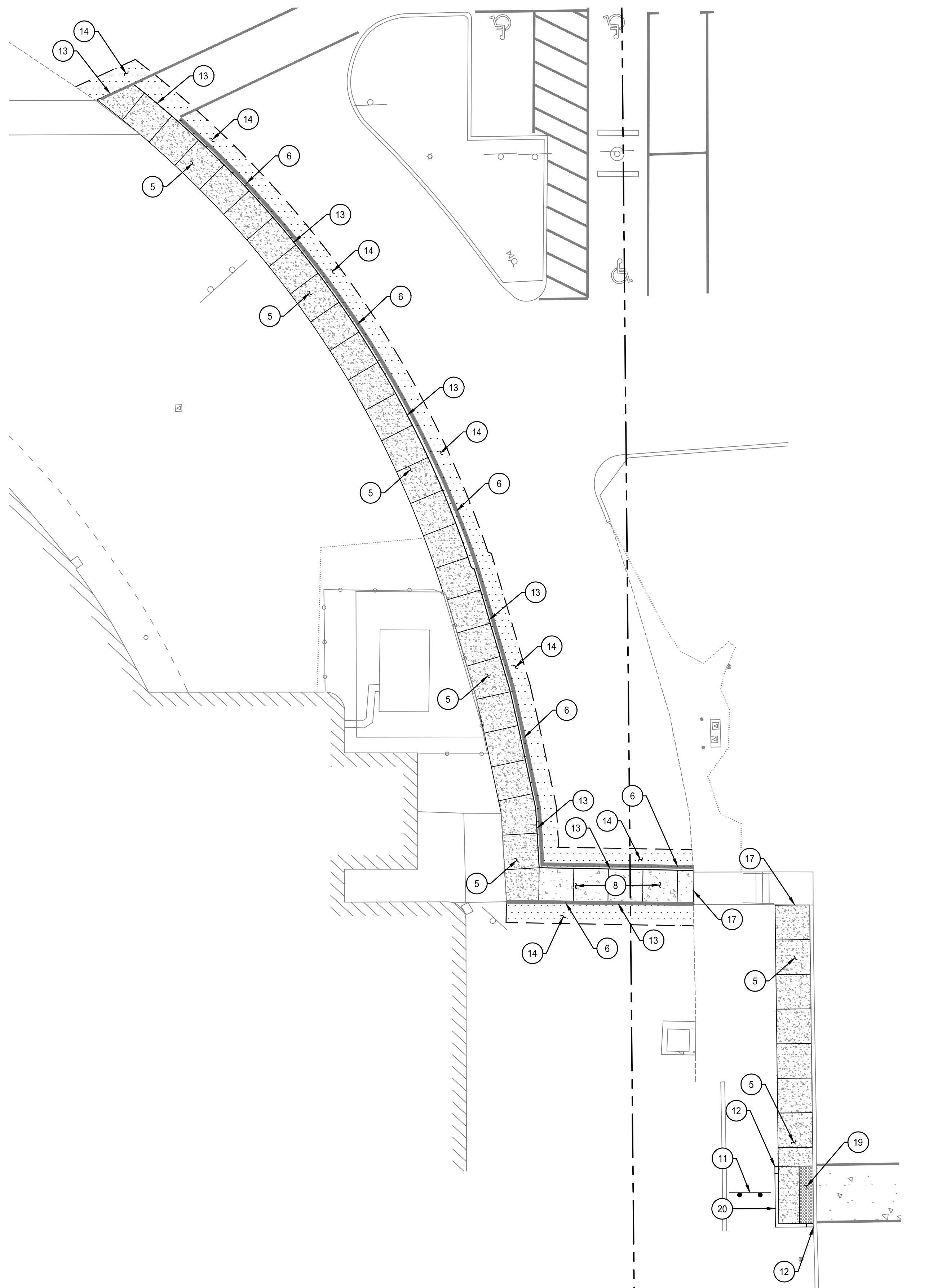
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1 TRAILER PARKING ENLARGEMENT
SCALE: 1" = 10'



3 BUS STOP ACCESS ENLARGEMENT
SCALE: 1" = 10'



2 PEDESTRIAN WALKWAY ENLARGEMENT
SCALE: 1" = 10'

SHEET NOTES

- ALL DIMENSIONS ARE TO FACE OF CURB.
- ALL SIDEWALK PAVEMENT JOINTS SHALL BE CONSTRUCTED PER DETAIL 6/C4.0.
- COORDINATE SIGNS AND SIGN LOCATIONS WITH OWNER AND ARCHITECT.
- SEE SHEET C2.1 FOR HORIZONTAL CONTROL PLANS.

KEY NOTES

#	DESCRIPTION	DETAIL REF.
1	PROTECT EXISTING CATCH BASIN. ENSURE POSITIVE DRAINAGE TOWARDS CATCH BASIN.	
2	STANDARD CURB	7/C4.0
3	FLUSH CURB	8/C4.0
4	REINFORCED CONCRETE PAVEMENT	1/C4.0
5	CONCRETE SIDEWALK	5/C4.0
6	4" WIDE WHITE STRIPE TO PROVIDE 5FT WIDTH CONCRETE WALKWAY	
7	DIAGONAL STRIPING FOR MOBILE TRAILER UNIT	12/C4.0
8	HEAVY CONCRETE PAVEMENT	2/C4.0
9	FLUSH CURB TO STANDARD CURB TRANSITION	
10	"RESERVED PARKING ONLY" SIGN	
11	COORDINATE SALVAGED SIGN LOCATION WITH OWNER	
12	CURB ENDING	9/C4.0
13	CONCRETE TO ASPHALT TRANSITION	4/C4.0
14	ASPHALT PAVEMENT TO MATCH INTO EXISTING ASPHALT.	3/C4.0
15	CONCRETE COLLAR AROUND EXISTING CATCH BASIN	14/C4.0
16	RESTORE LANDSCAPE AREAS DAMAGED DURING CONSTRUCTION. BASIS OF DESIGN IS HYDROSEED. LANDSCAPE SUBCONTRACTOR TO COORDINATE WITH OWNER AND ARCHITECT.	
17	CONNECT TO EXISTING SIDEWALK	
18	PEDESTRIAN SITE LIGHTING. SEE ELECTRICAL AND ARCHITECTURAL PLANS.	
19	TACTILE WARNING	11/C4.0
20	CANE STOP	10/C4.0
21	ADA RAMP	10/C4.0
22	DIRECTIONAL ARROWS	13/C4.0
23	HANDRAIL. CONCRETE SLOPE EXCEEDS 5% AND 6" RISE REQUIRING HANDRAILS. SEE GRADING PLANS.	3/C4.1
24	RESTORE ALL STRIPING DAMAGED DURING CONSTRUCTION.	

SHEET LEGEND

---	SAWCUT LINE
[Pattern]	CONCRETE SIDEWALK
[Pattern]	CONCRETE PAVEMENT
[Pattern]	ASPHALT PAVEMENT



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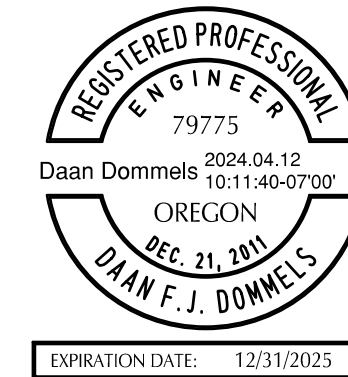
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Architect/Engineer of Record:

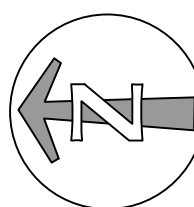
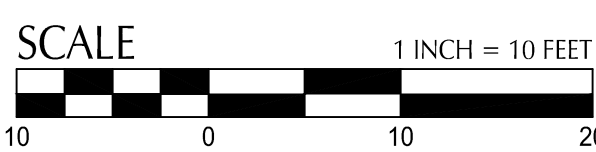


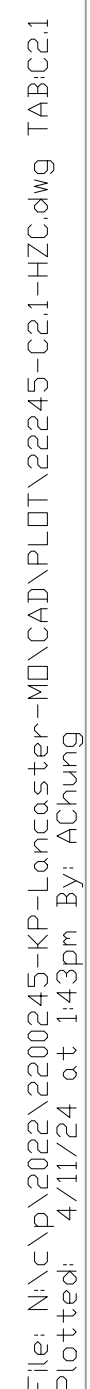
Facility
KAISER NORTH LANCASTER
2400 LANCASTER DR NE,
SALEM, OR 97305
Project
Site Improvements

Sheet Title
SITE PLAN

Building ID: NLR	Floor Levels: Site	Section: -
Scale	As Indicated	KP Project No. CAP027382
Drawn By	PT	Permit No. -
Chkd By	AC	Sheet
Issue Date	April 15th, 2024	
jrj Project No.	202010-07	

C2.0







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SHEET NOTES

- SLOPES PROVIDED ON SLOPE ARROW ARE FOR REFERENCE ONLY.
- LANDINGS ON ACCESSIBLE ROUTES SHALL NOT EXCEED 2% IN ANY DIRECTION.
- ALL ACCESSIBLE ROUTES SHALL COMPLY WITH CURRENT ADA ACCESSIBILITY GUIDELINES FOR BUILDING AND FACILITIES (ADAAG).

KEY NOTES

NOTE	DESCRIPTION	DETAIL REF.
1	CONNECT TO EXISTING SIDEWALK	
2	CONCRETE TRANSITION PANEL	
3	MATCH INTO EXISTING GRADE. DO NOT EXCEED SLOPES GREATER THAN 3:1 IN LANDSCAPE AND 4.5% IN HARDSCAPE.	
4	FLUSH CURB TO STANDARD CURB TRANSITION	
5	INSTALL SIDEWALK AGAINST BACK OF EXISTING CURB	
6	MAINTAIN EXISTING ASPHALT EDGE GRADE AND CONSTRUCT ADA RATED CONCRETE PAVEMENT	

GRADING LABEL LEGEND

CALLOUT	DESCRIPTION
X.X%	GRADING SLOPE AND DIRECTION (DOWNHILL)
[X.X%]	SLOPE ORIENTATION INDICATING DIRECTION OF MAXIMUM GRADE (DOWNHILL)
XXXX.XX	SPOT ELEVATION DESCRIPTION LISTED BELOW. NO DESCRIPTION MEANS TP OR TG
EG FG TC TP	EXISTING GRADE FINISHED GRADE TOP OF CURB TOP OF PAVEMENT
(XXX.Xx)	EXISTING GRADE (MATCH WHERE APPLICABLE)

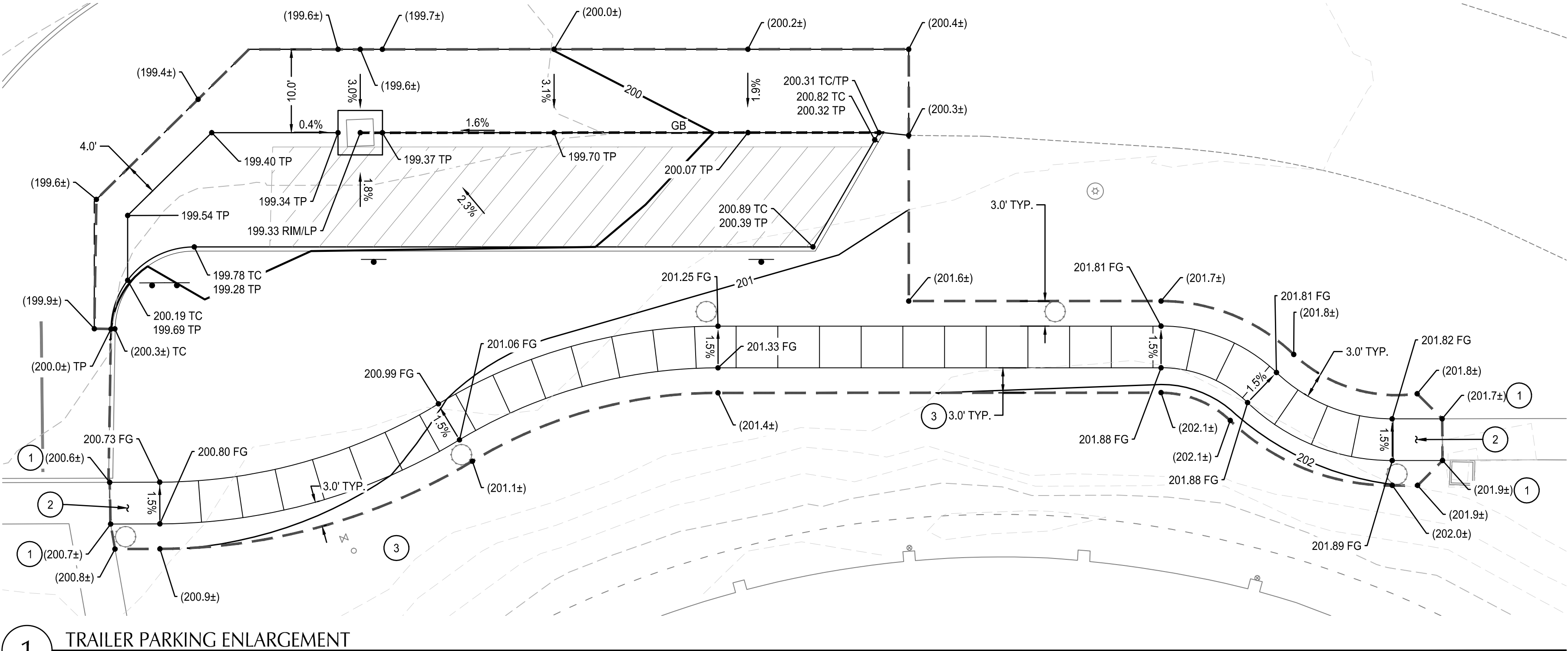
SHEET LEGEND

GB	GRADE BREAK
---	SAWCUT LINE
49	EX. CONTOUR MINOR
50	EX. CONTOUR MAJOR
49	CONTOUR MINOR (FG)
50	CONTOUR MAJOR (FG)
---	LIMITS OF WORK

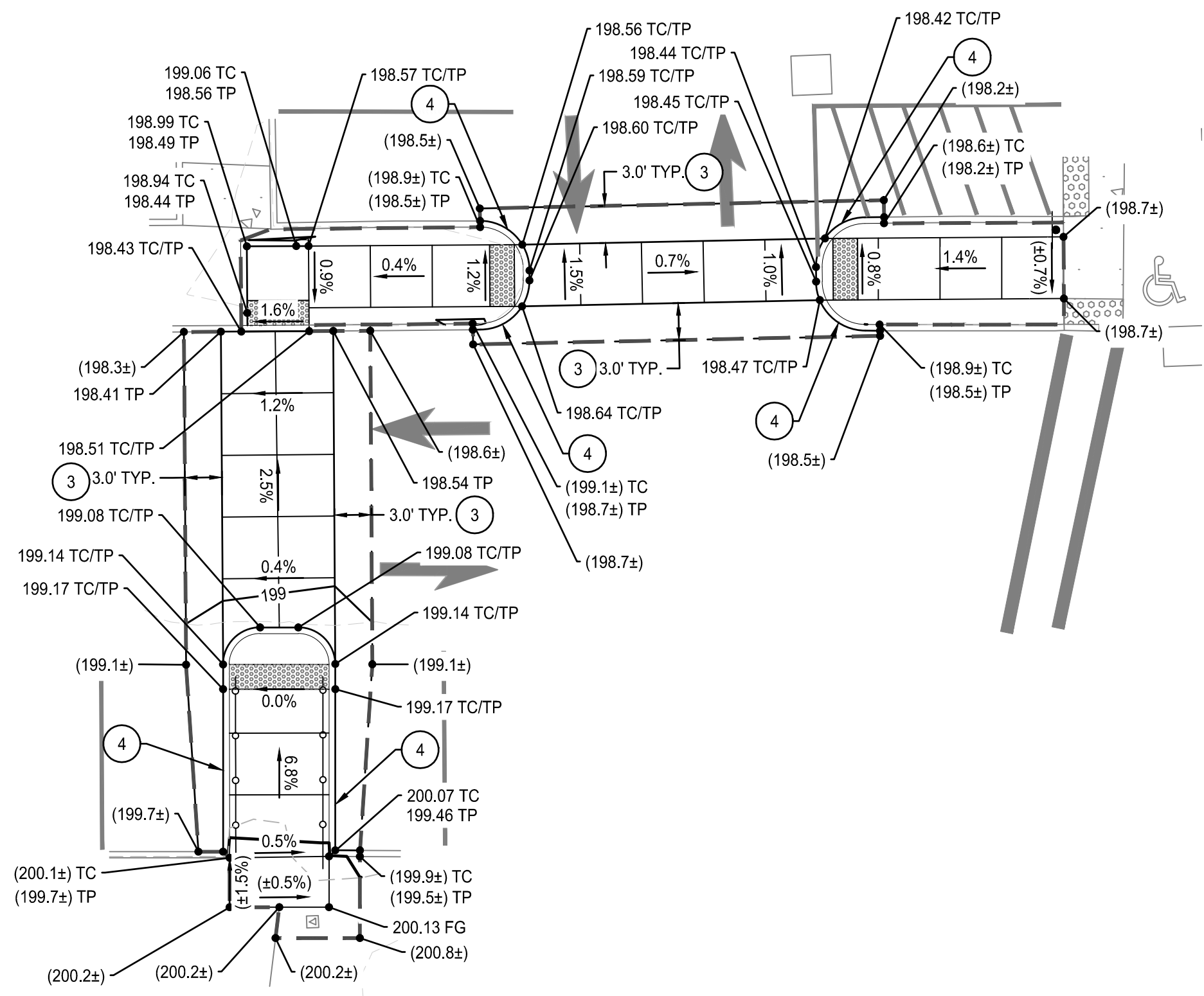
STORMWATER NARRATIVE

THE PROPOSED SITE IMPROVEMENTS RESULT IN APPROXIMATELY 5,600 SF OF NEW AND REDEVELOPED IMPERVIOUS AREA WHICH IS LESS THAN THE CITY OF SALEM 10,000 SF IMPERVIOUS AREA THRESHOLD FOR TRIGGERING STORMWATER MANAGEMENT. NO STORMWATER MANAGEMENT FACILITIES ARE REQUIRED OR PROPOSED.

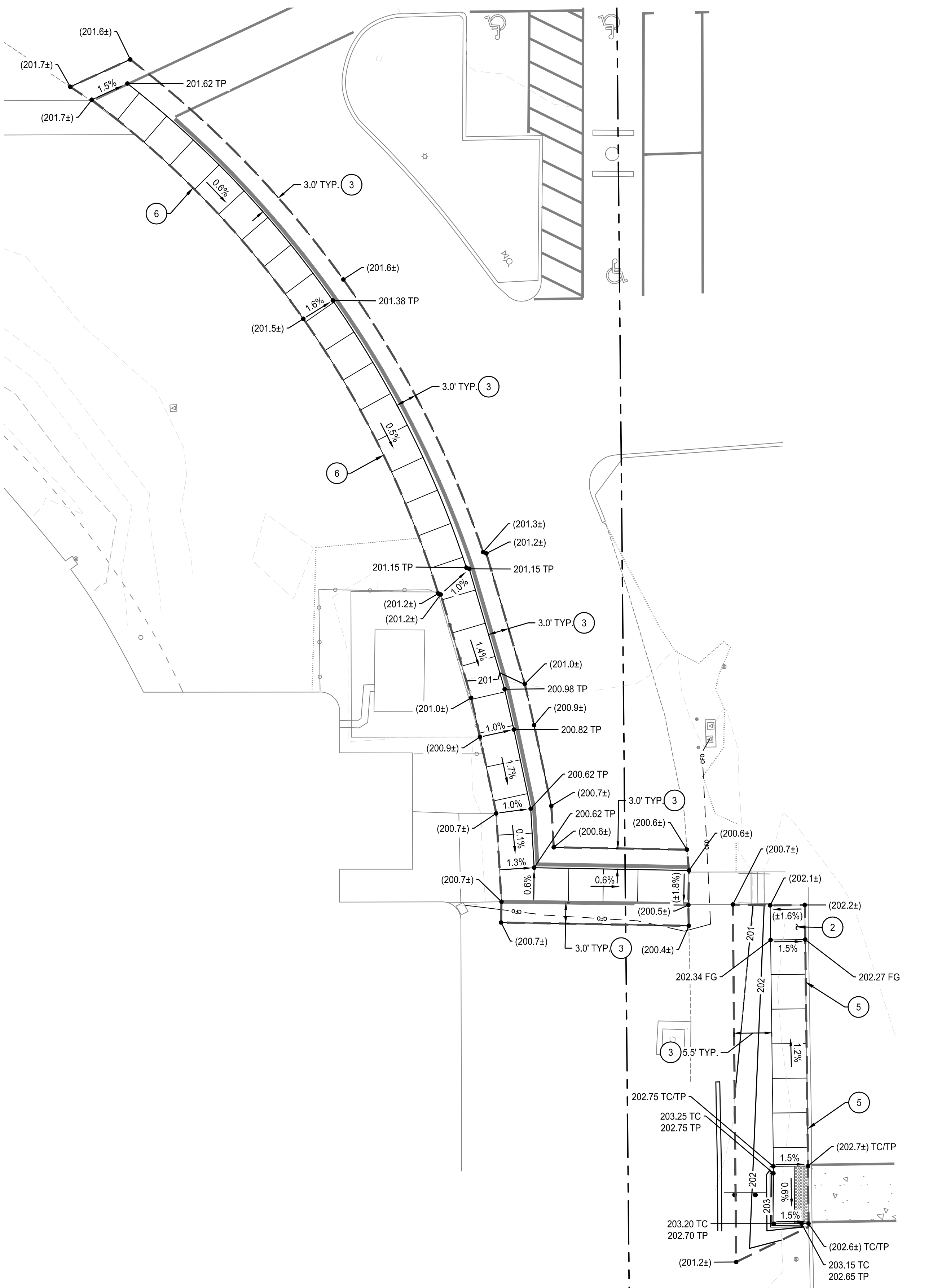
GRADING FACILITATES DRAINAGE TO THE EXISTING DRAINAGE STRUCTURES.



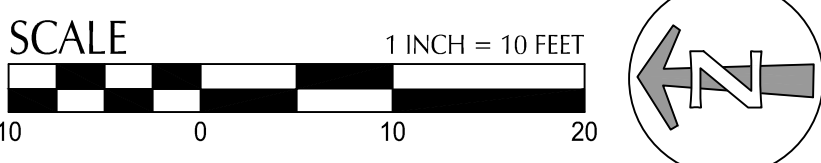
1 TRAILER PARKING ENLARGEMENT
SCALE: 1" = 10'

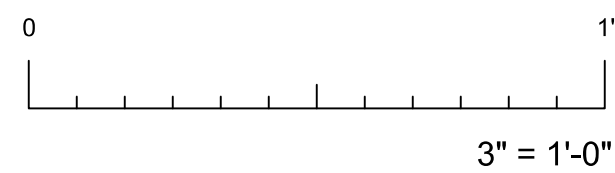
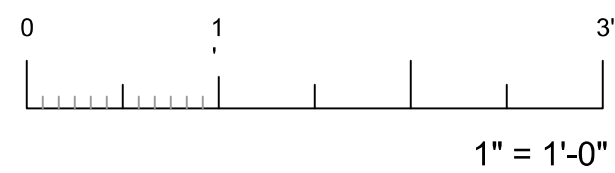
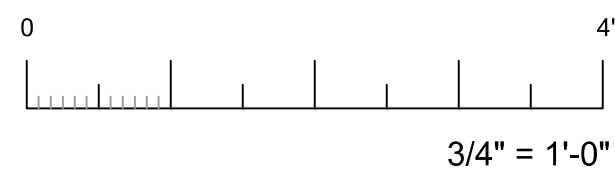
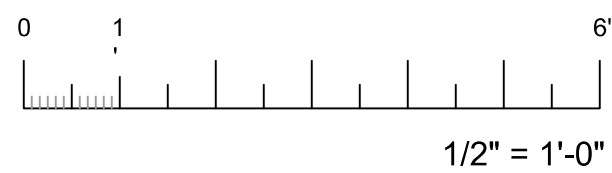
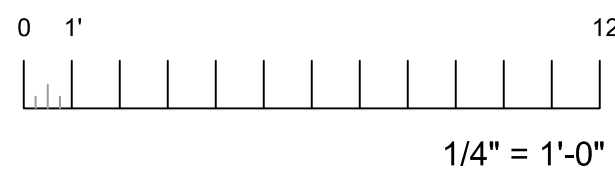
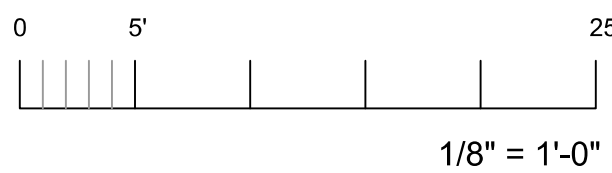


3 BUS STOP ACCESS ENLARGEMENT
SCALE: 1" = 10'

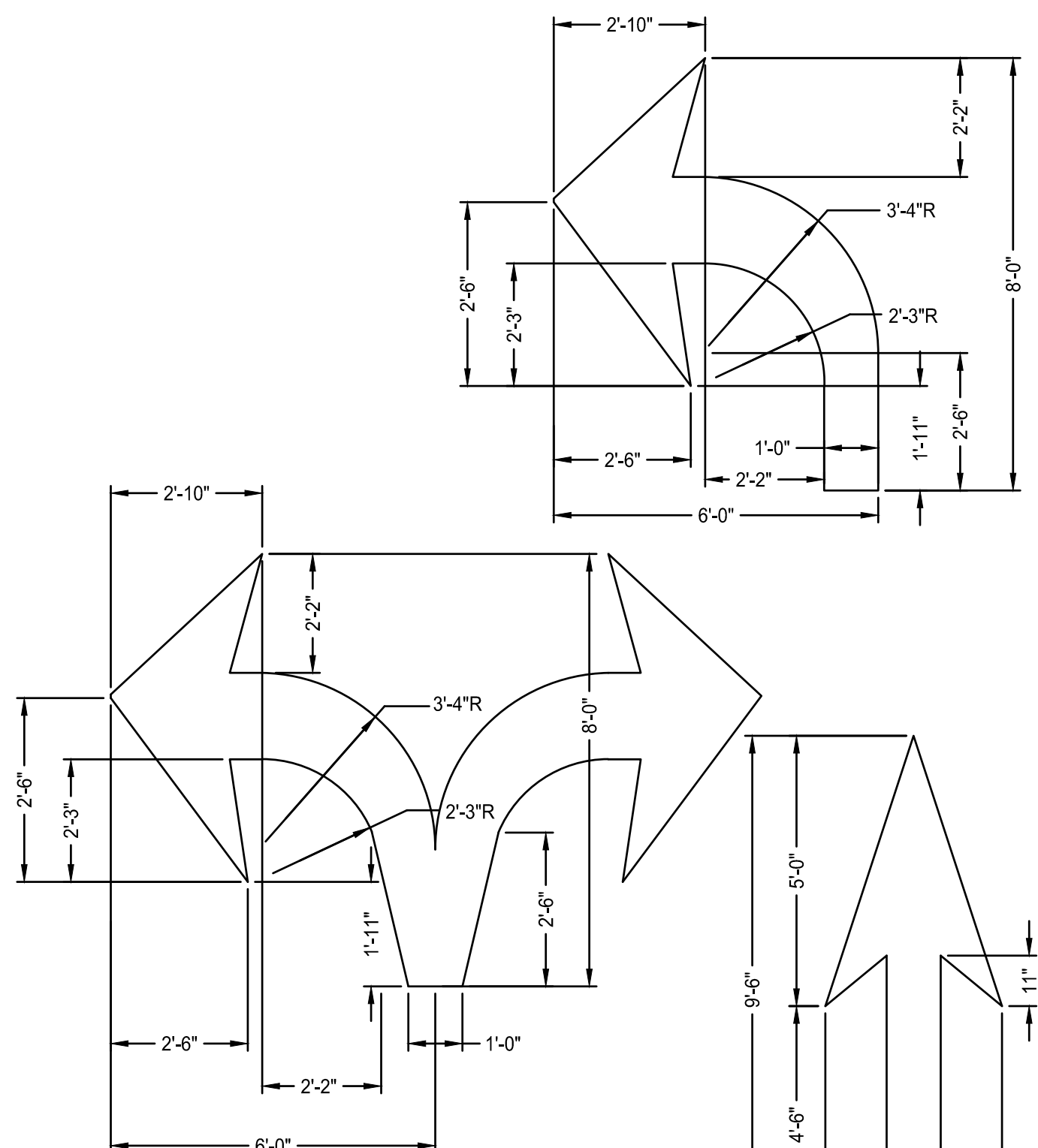


2 PEDESTRIAN WALKWAY ENLARGEMENT
SCALE: 1" = 10'



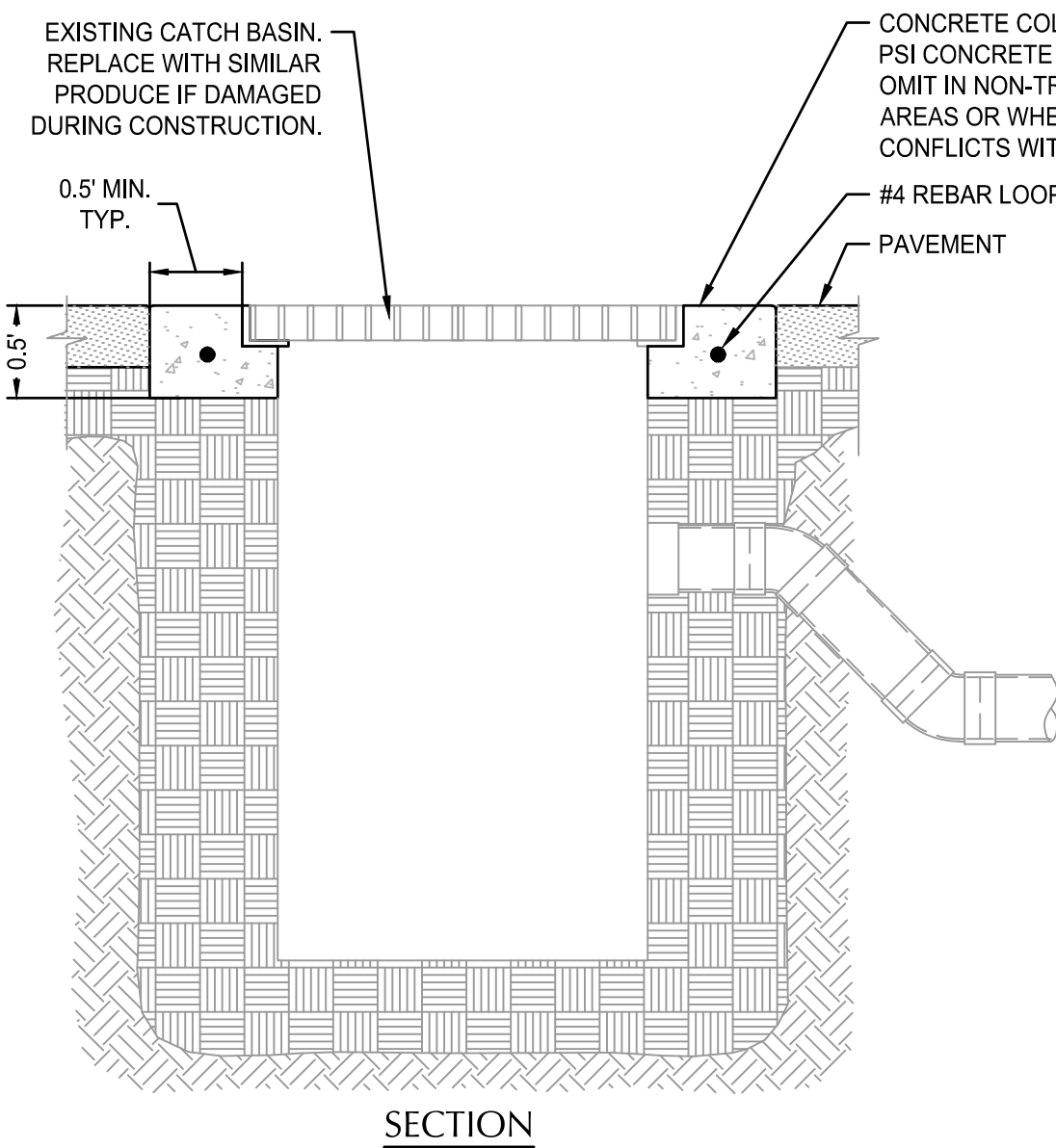


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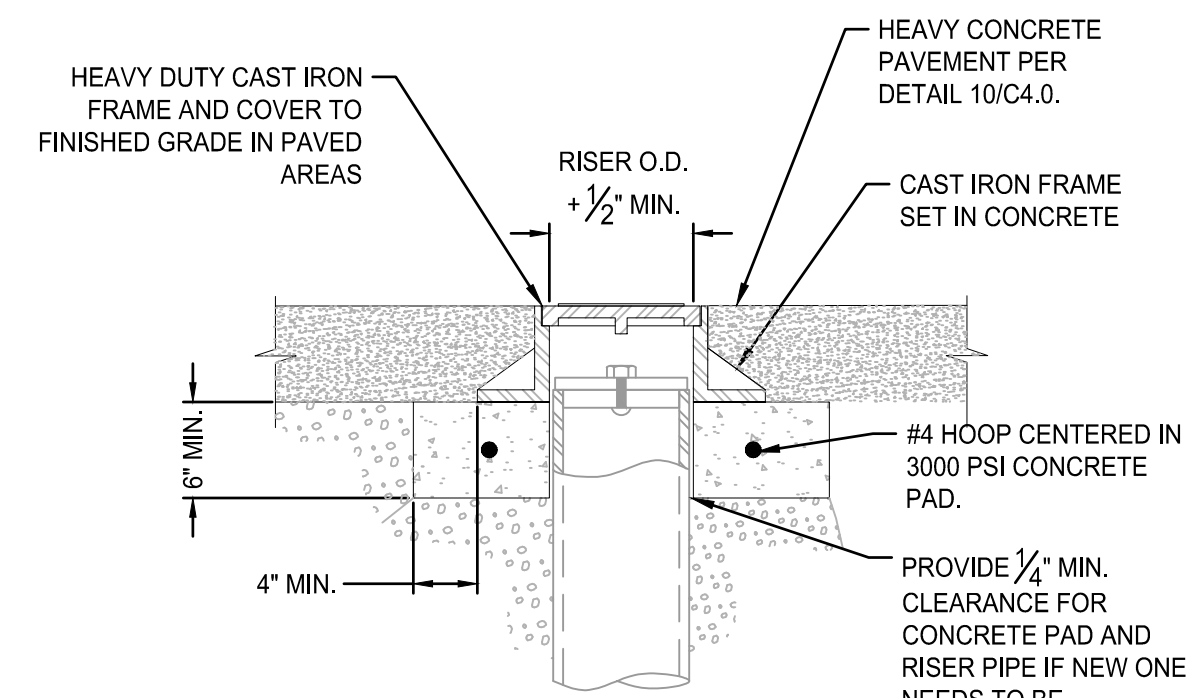
13 DIRECTIONAL ARROWS

SCALE: NTS



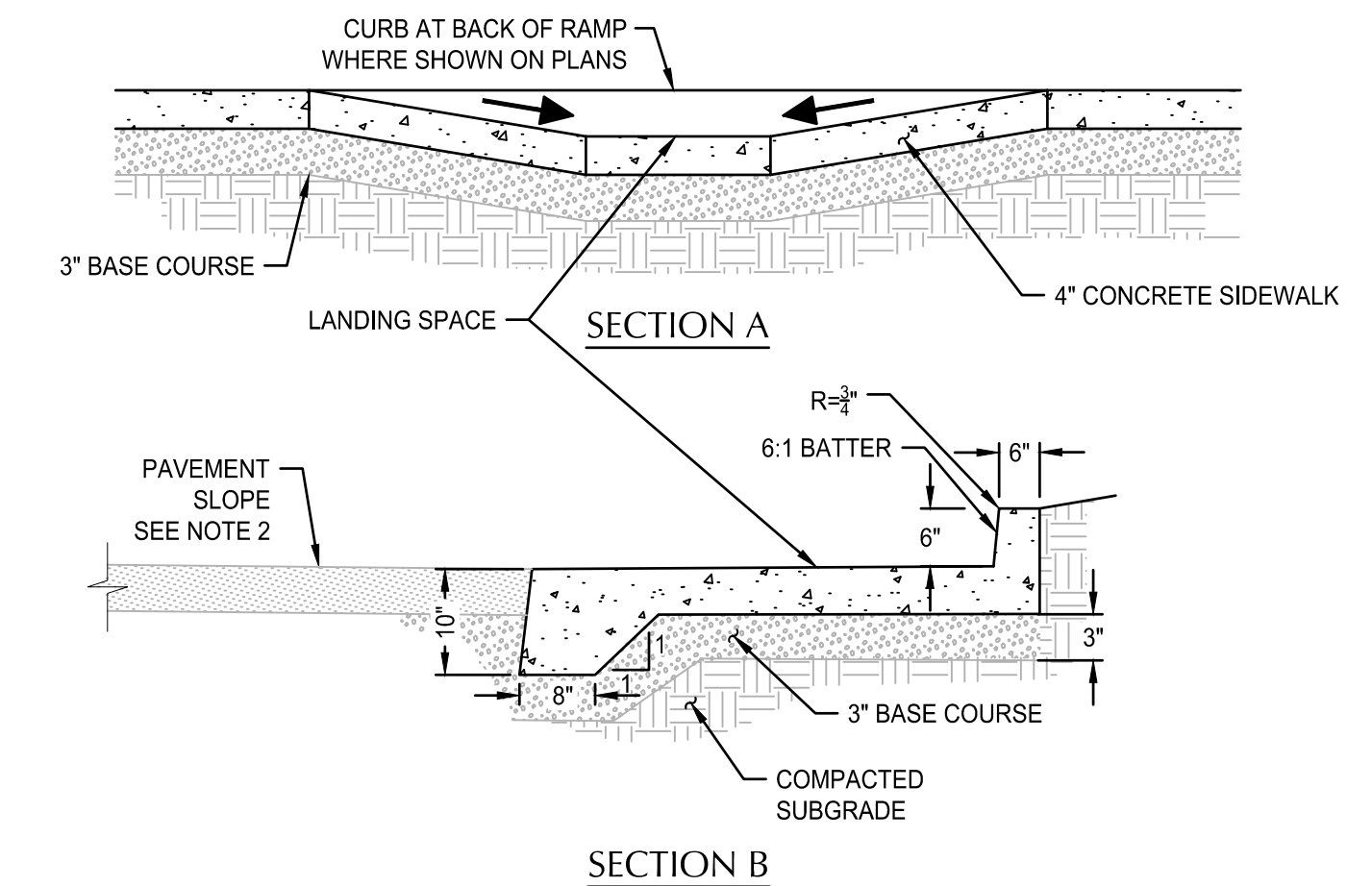
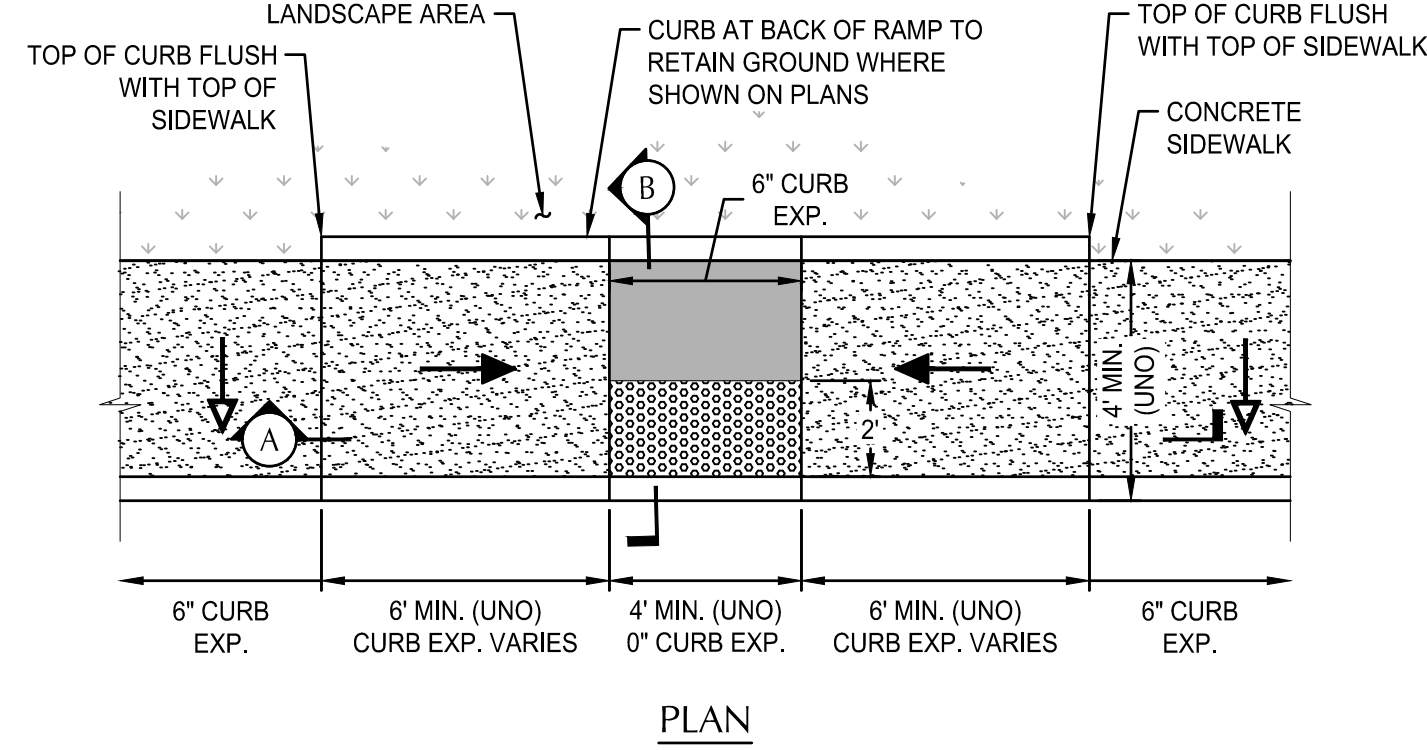
14 CATCH BASIN CONCRETE COLLAR

SCALE: NTS



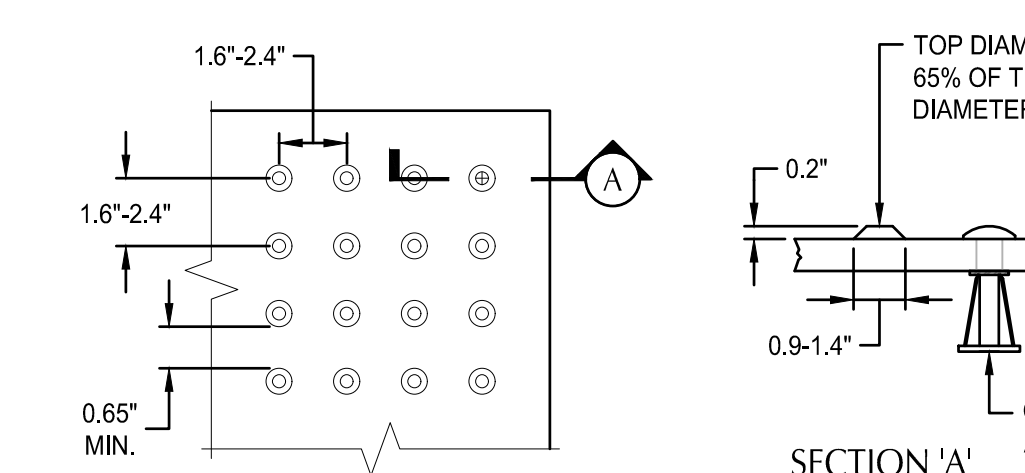
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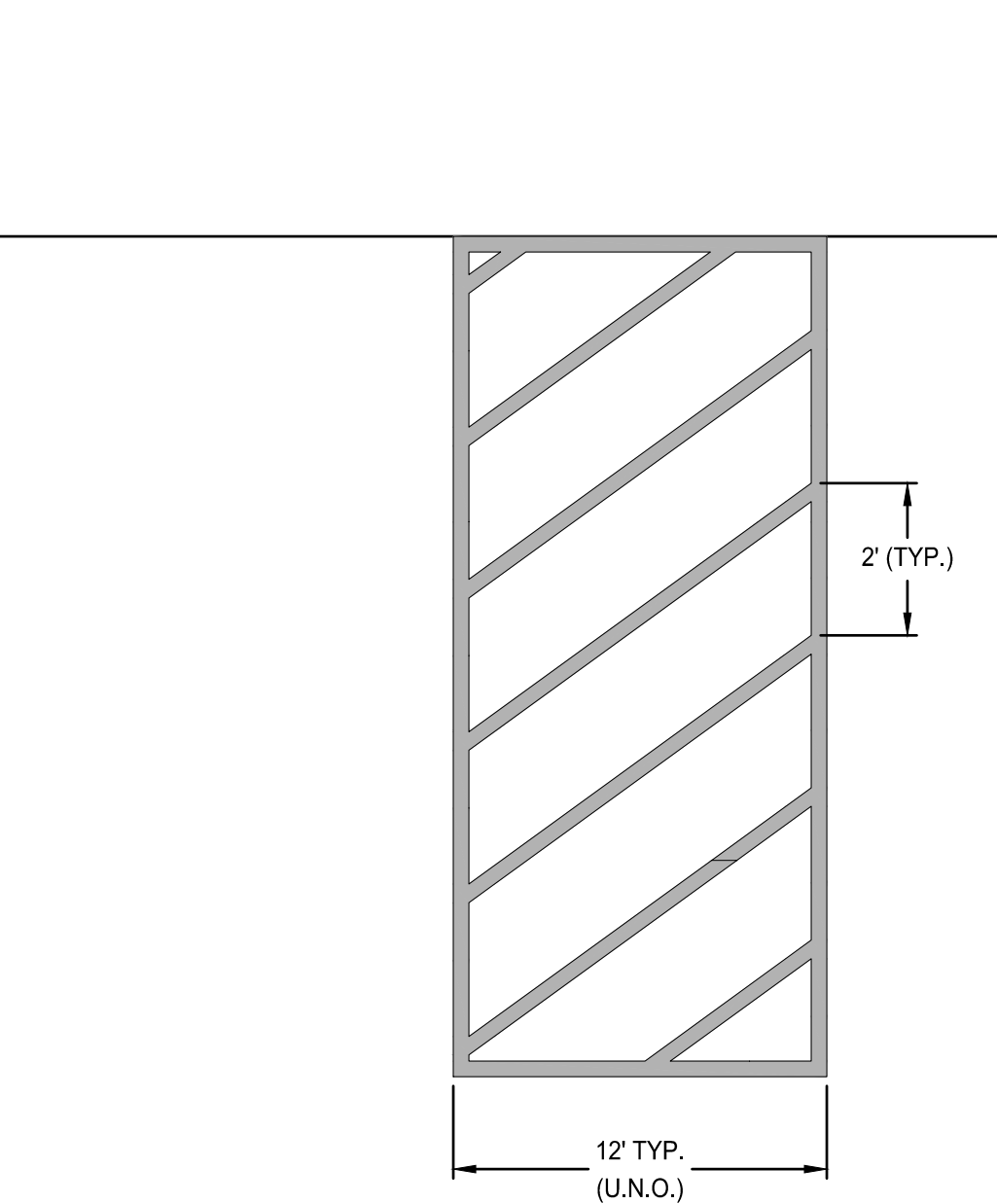
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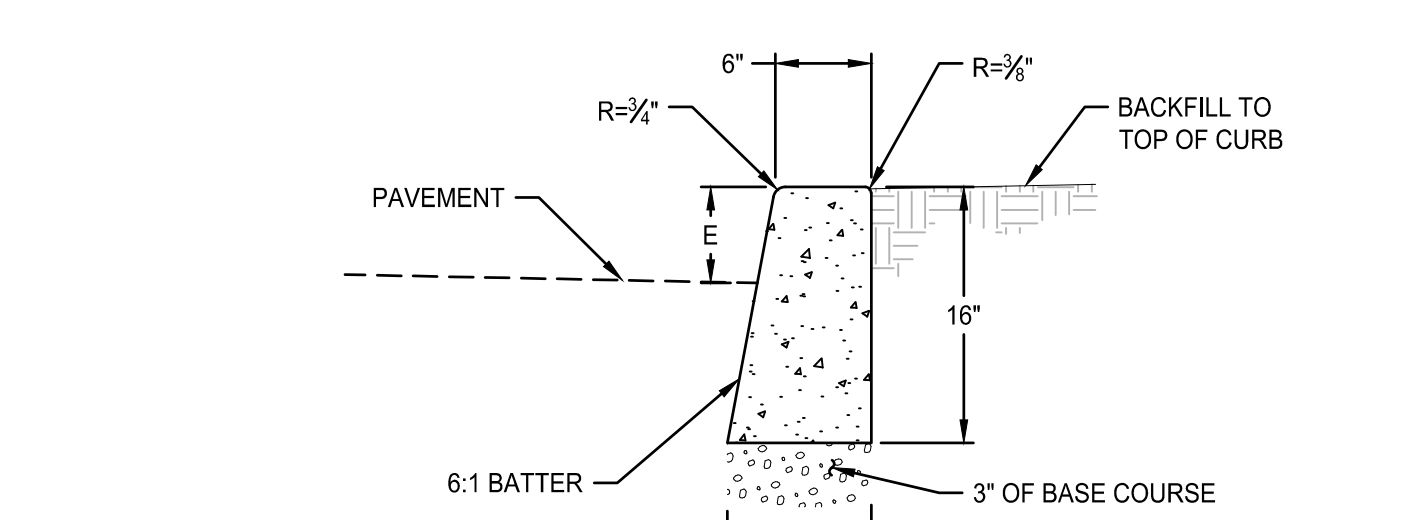
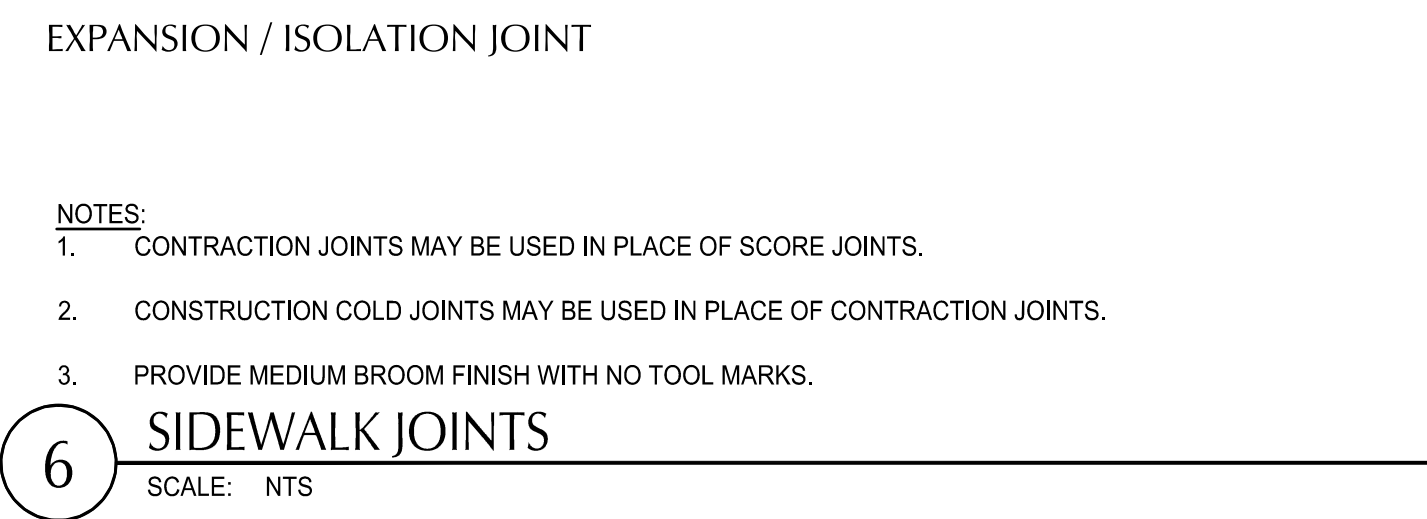
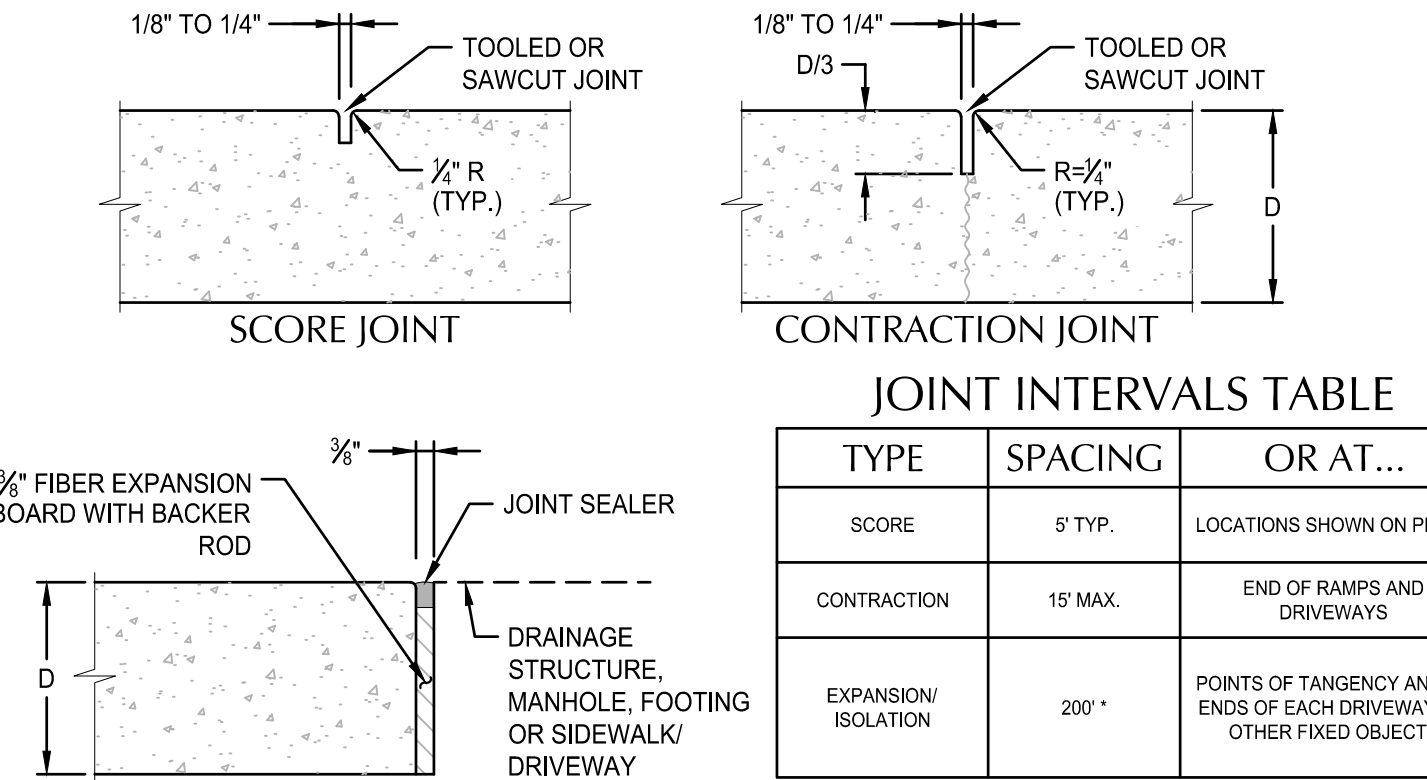
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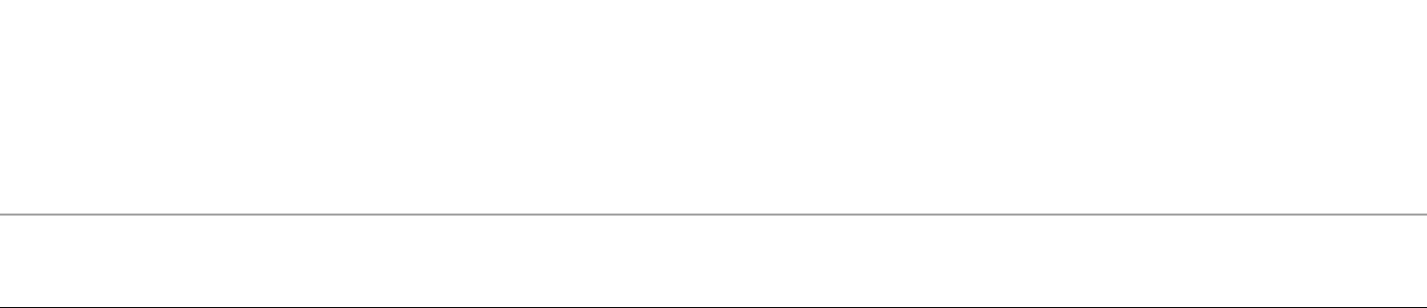
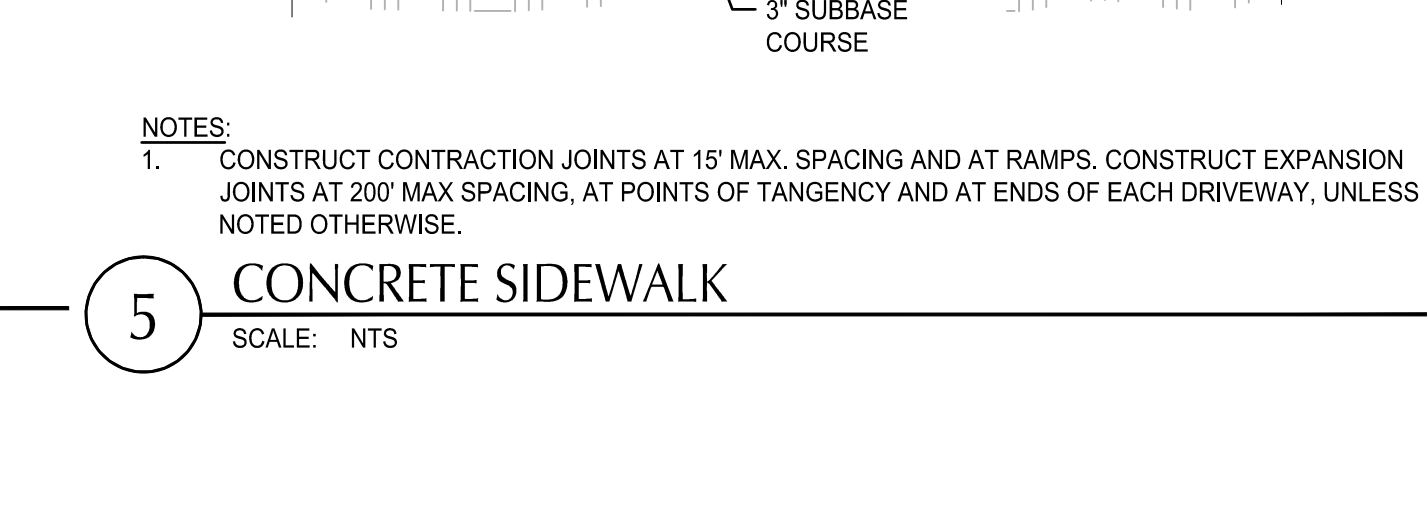
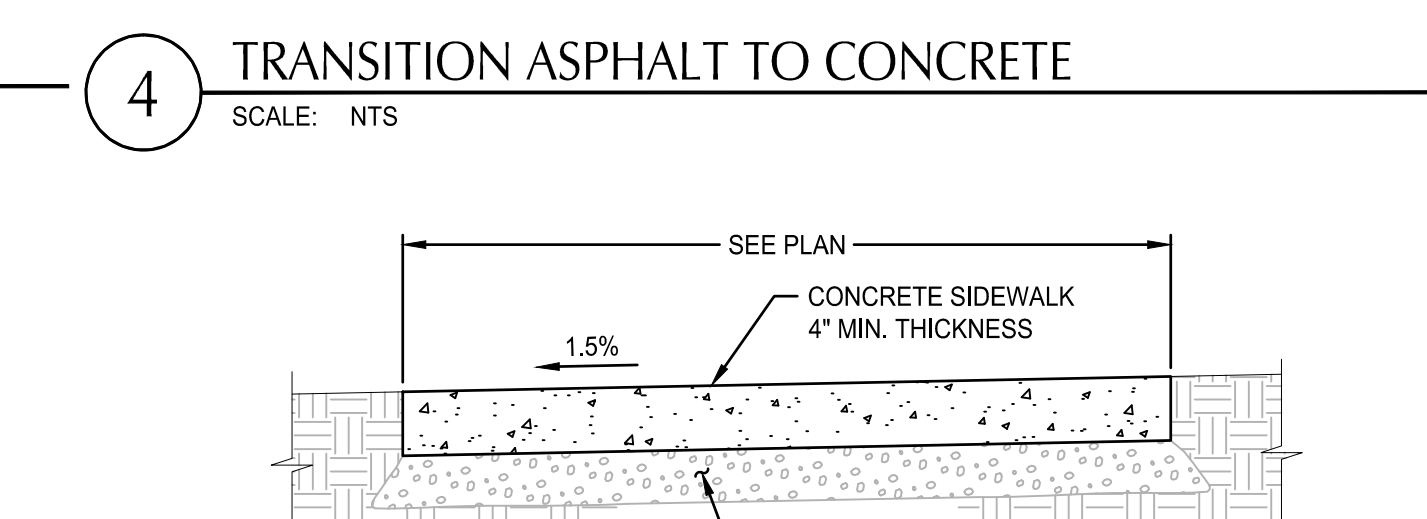
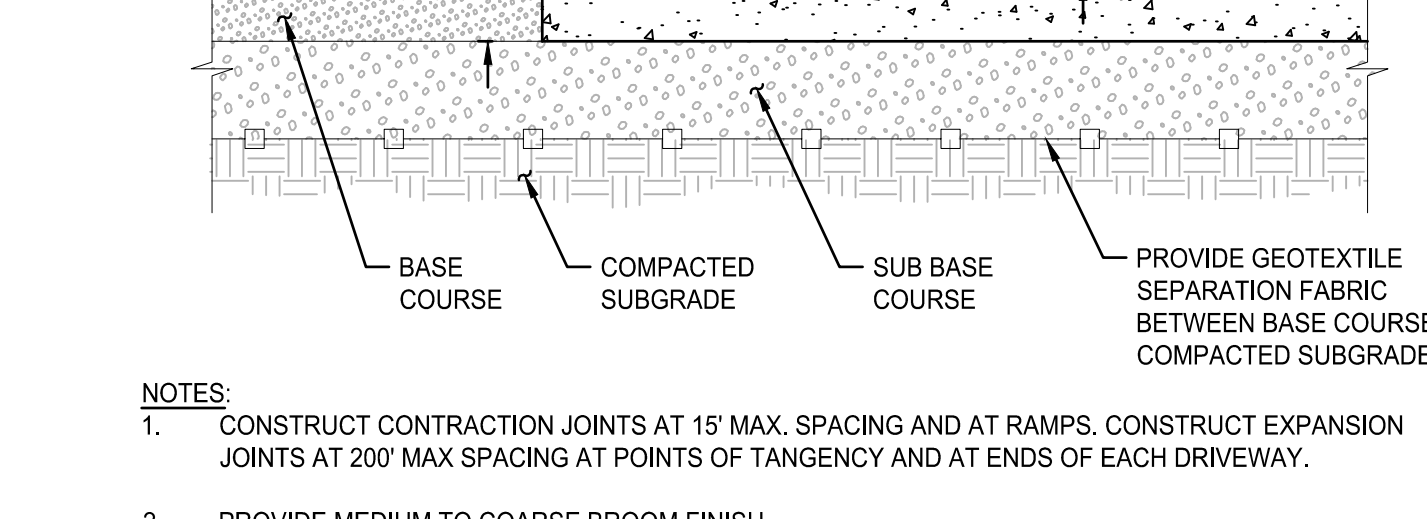
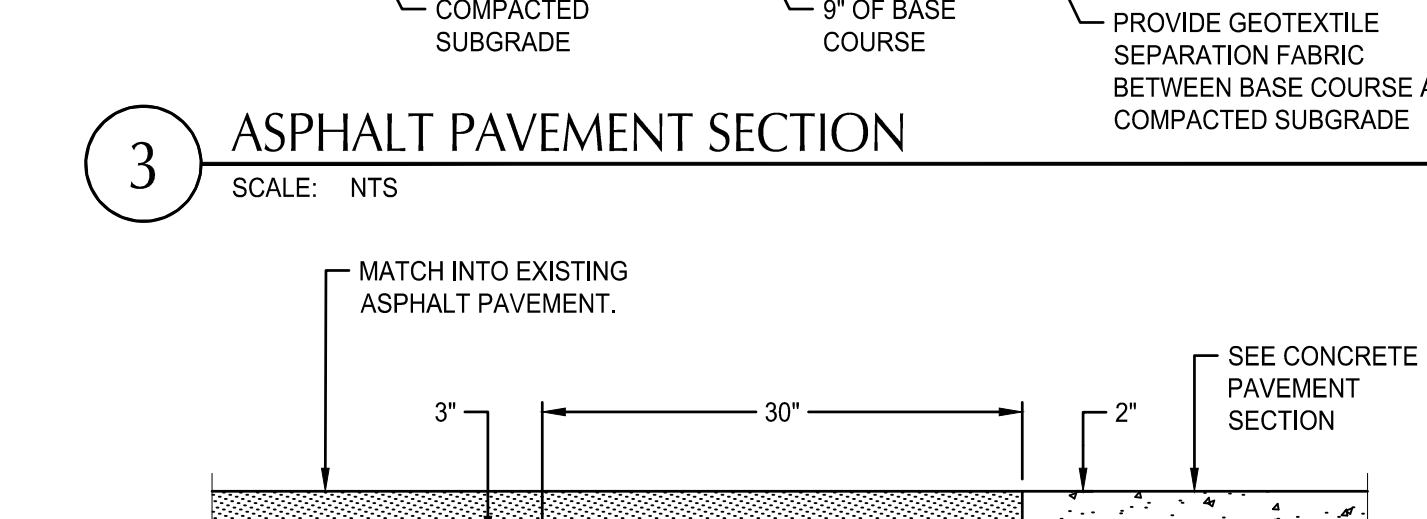
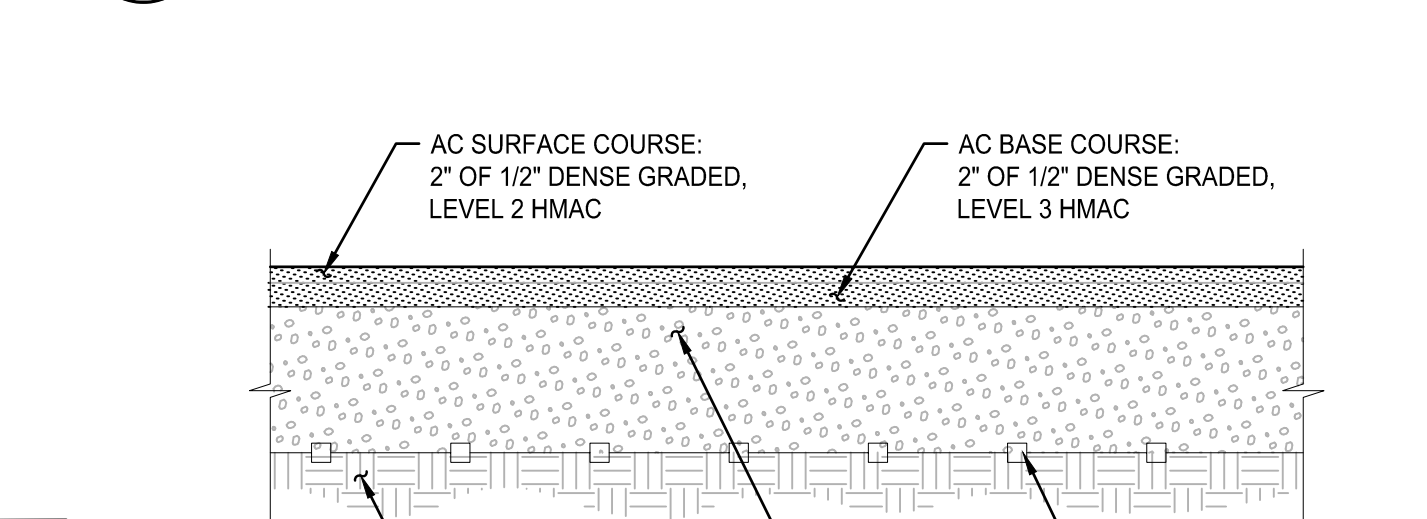
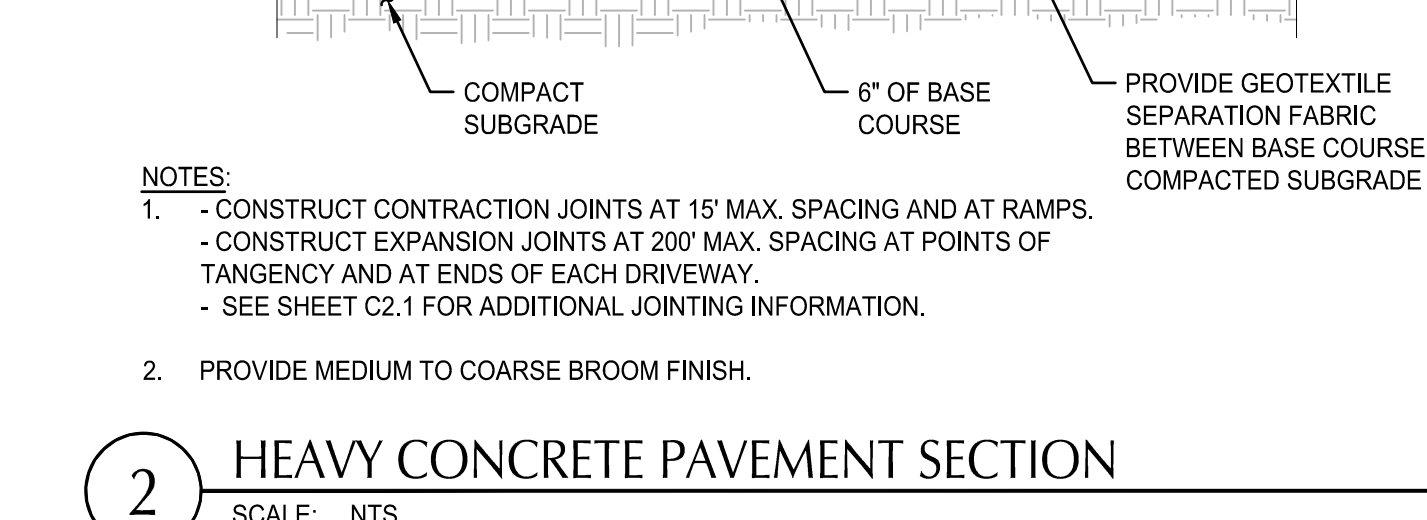
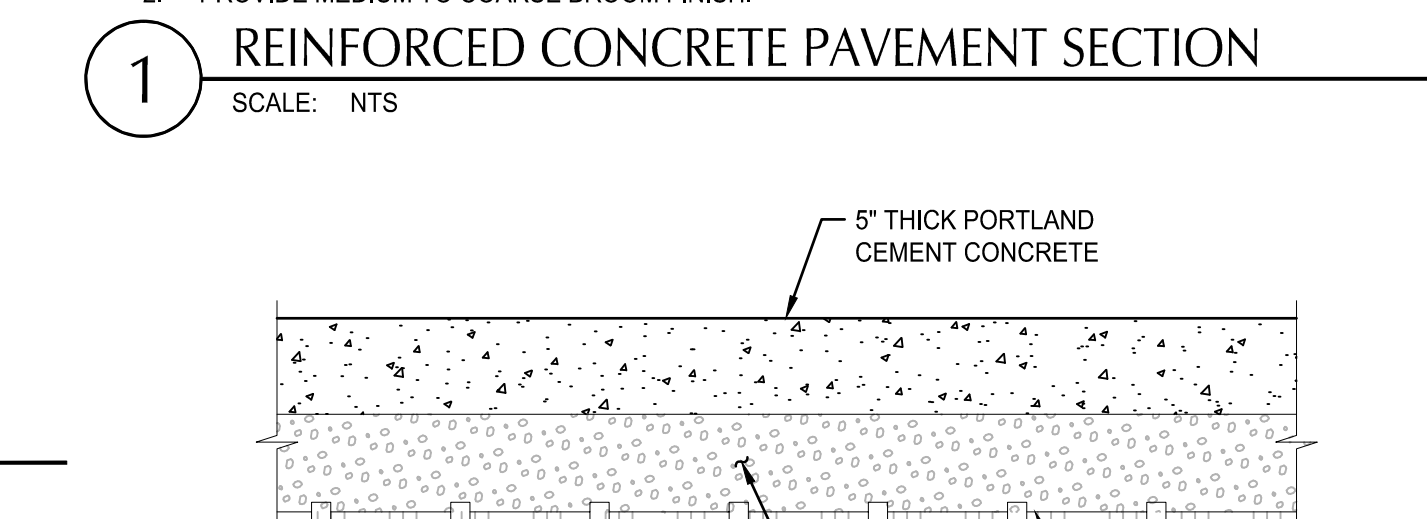
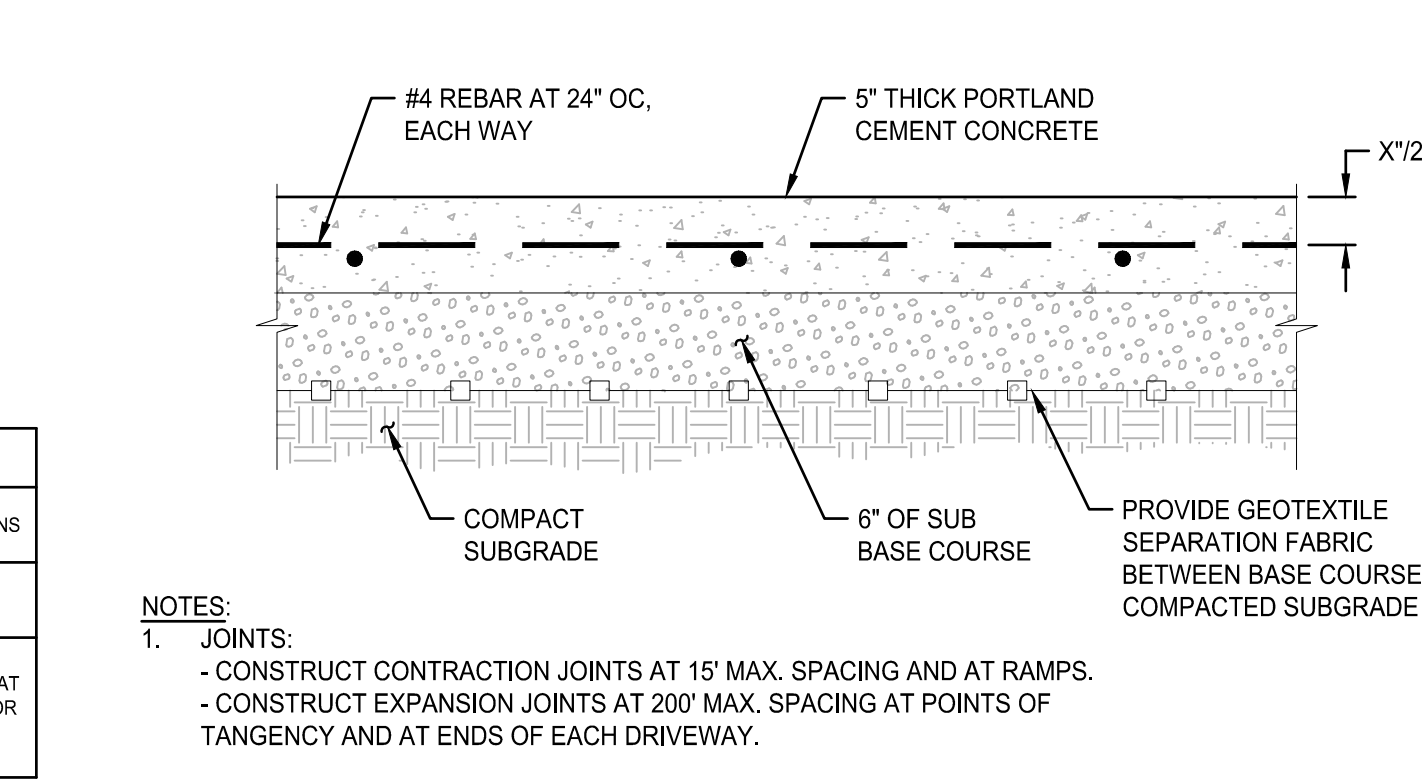
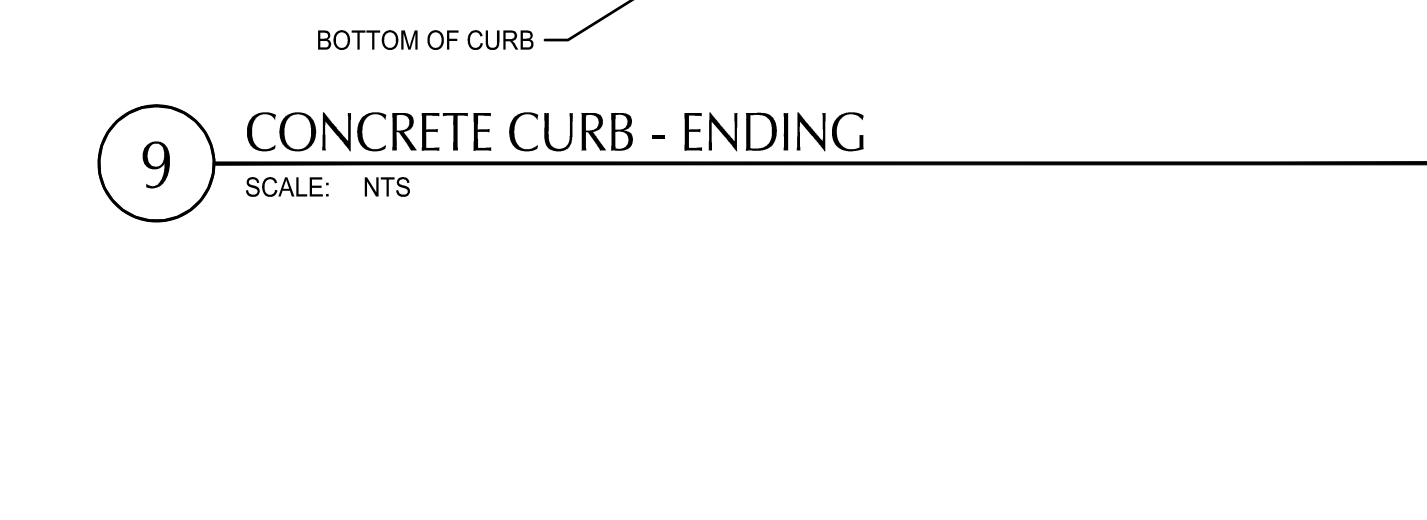
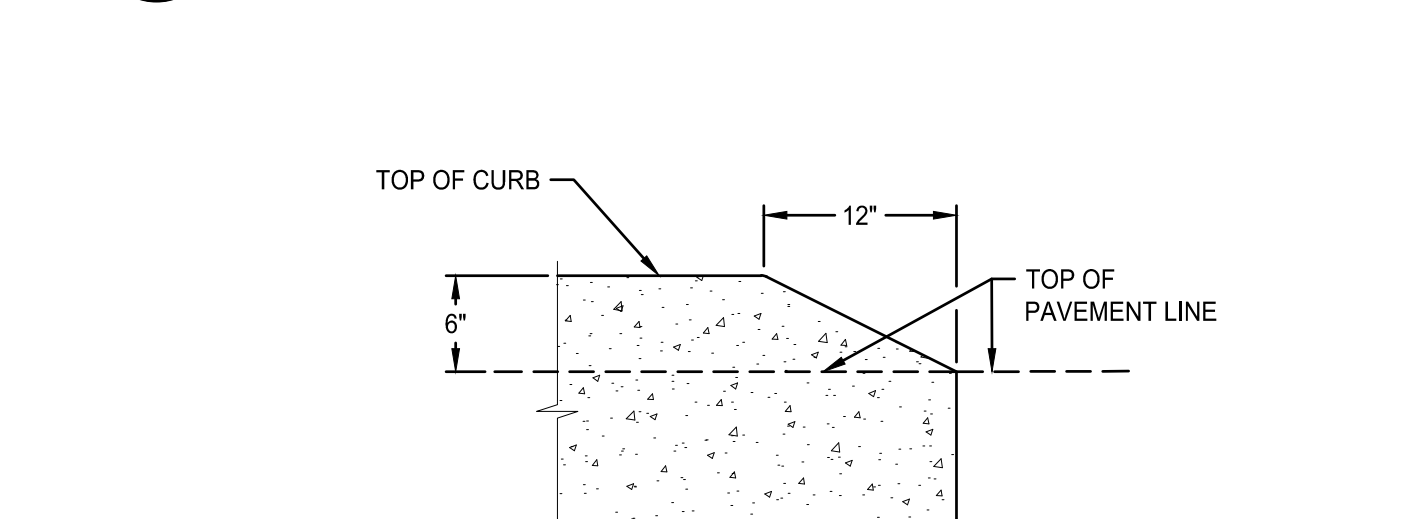
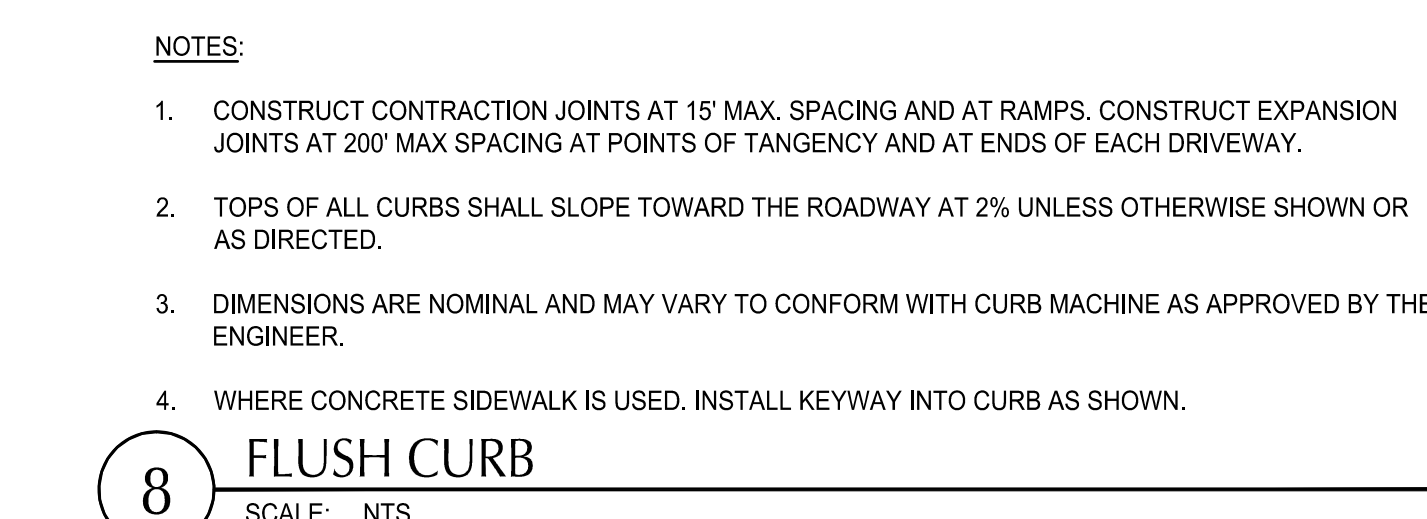
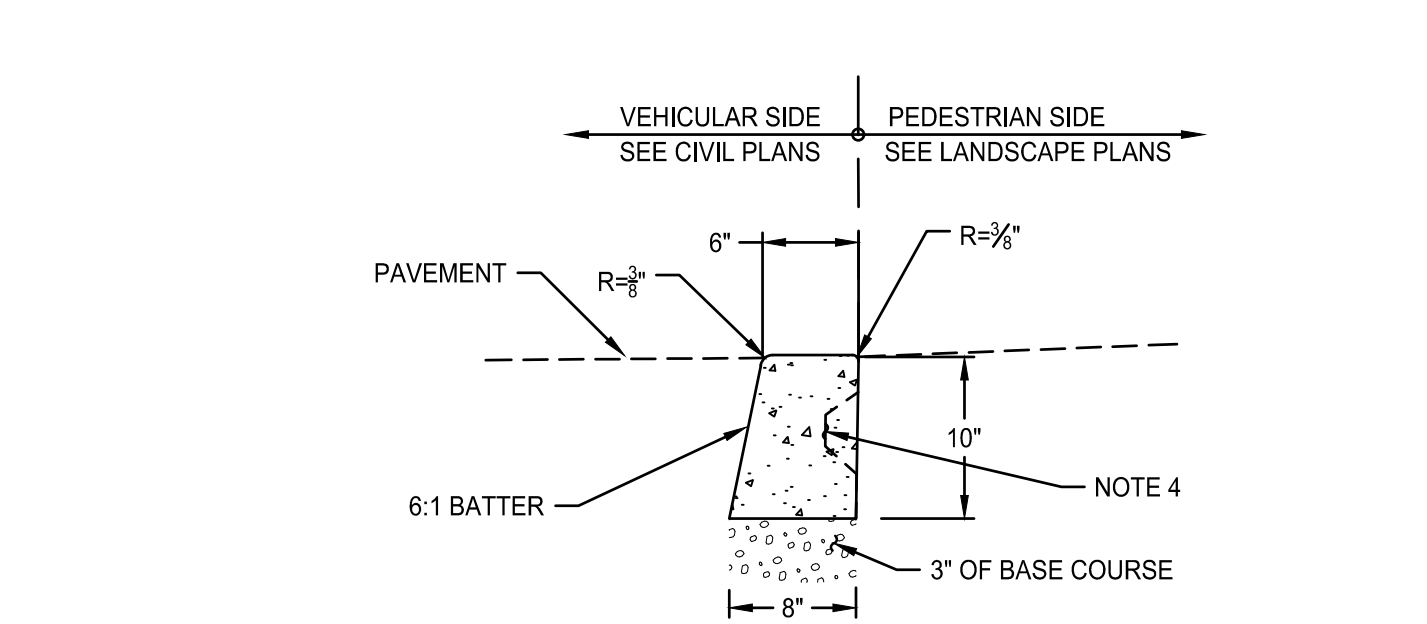
12 DROP OFF PAVEMENT STRIPING

SCALE: NTS



7 CONCRETE CURB - STANDARD

SCALE: NTS



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100% Construction Documents

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Project Architect Approval:

Architect/Engineer of Record:



Facility
KAISER NORTH LANCASTER
2400 LANCASTER DR NE,
SALEM, OR 97305
Project
Site Improvements

Sheet Title
DETAILS

Building ID: NLR	Floor Levels: Site	Section: -
Scale	As Indicated	KP Project No. CAP027382
Drawn By	PT	Permit No.
Chkd By	AC	Sheet
Issue Date	April 15th, 2024	C4.0
jrj Project No.	202010-07	

File: N:\c\p\2022\22020245-KP-Lancaster-MDCAD\PL01\A22245-C5-0-SPEC.dwg TAB: C5.0
Plotted: 4/11/24 at 1:44pm By: MChung



SITE CLEARING

SECTION 31 10 00 – SITE CLEARING

PART 1 – GENERAL

1.1 SUMMARY

A. SECTION INCLUDES:

1. PROTECTING EXISTING TREES AND VEGETATION TO REMAIN.
2. REMOVING EXISTING TREES AND OTHER VEGETATION.
3. CLEARING AND GRUBBING.
4. STRIPPING AND STOCKPILING TOPSOIL.
5. REMOVING ABOVE- AND BELOW-GRADE SITE IMPROVEMENTS.
6. DISCONNECTING, CAPPING OR SEALING SITE UTILITIES.

1.2 SUBMITTALS

A. PRODUCT DATA FOR EACH TYPE OF PRODUCT INDICATED.

1.3 MATERIAL OWNERSHIP

A. EXCEPT FOR STRIPPED TOPSOIL AND OTHER MATERIALS INDICATED TO REMAIN ON OWNER'S PROPERTY, CLEARED MATERIALS SHALL BECOME CONTRACTOR'S PROPERTY AND SHALL BE REMOVED FROM PROJECT SITE AND DISPOSED OF PROPERLY.

1.4 PROJECT CONDITIONS

A. TRAFFIC: MINIMIZE INTERFERENCE WITH ADJOINING ROADS, STREETS, WALKS, AND OTHER ADJACENT OCCUPIED OR USED FACILITIES DURING SITE-CLEARING OPERATIONS.

1. DO NOT CLOSE OR OBSTRUCT STREETS, WALKS, OR OTHER ADJACENT OCCUPIED OR USED FACILITIES WITHOUT PERMISSION FROM OWNER AND AUTHORITIES HAVING JURISDICTION.
2. PROVIDE ALTERNATE ROUTES AROUND CLOSED OR OBSTRUCTED TRAFFIC WAYS IF REQUIRED BY OWNER OR AUTHORITIES HAVING JURISDICTION.

B. SALVABLE IMPROVEMENTS: CAREFULLY REMOVE ITEMS INDICATED TO BE SALVAGED AND STORE ON OWNER'S PREMISES.

C. UTILITY LOCATOR SERVICE: NOTIFY UTILITY LOCATOR SERVICE FOR AREA WHERE PROJECT IS LOCATED BEFORE SITE CLEARING.

D. DO NOT COMMENCE SITE CLEARING OPERATIONS UNTIL TEMPORARY EROSION- AND SEDIMENTATION-CONTROL AND TREE AND VEGETATION-PROTECTION MEASURES ARE IN PLACE.

E. THE FOLLOWING PRACTICES ARE PROHIBITED WITHIN PROTECTION ZONES:

1. STORAGE OF CONSTRUCTION MATERIALS, DEBRIS, OR EXCAVATED MATERIAL.
2. PARKING VEHICLES OR EQUIPMENT.
3. FOOT TRAFFIC.
4. ERECTION OF SHEDS OR STRUCTURES.
5. IMPOUNDMENT OF WATER.
6. EXCAVATION OR OTHER DIGGING UNLESS OTHERWISE INDICATED.
7. ATTACHMENT OF SIGNS TO OR WRAPPING MATERIALS AROUND TREES OR PLANTS UNLESS OTHERWISE INDICATED.

1.5 DEFINITIONS

A. TOPSOIL: NATURAL OR CULTIVATED SURFACE-SOIL LAYER CONTAINING ORGANIC MATTER, SAND, SILT, AND CLAY PARTICLES; FRIABLE, PERVIOUS, AND BLACK OR A DARKER SHADE OF BROWN, GRAY, OR RED THAN UNDERLYING SUBSOIL; REASONABLY FREE OF SUBSOIL, CLAY LUMPS, GRAVEL, AND OTHER OBJECTS MORE THAN 2 INCHES IN DIAMETER; AND FREE OF WEEDS, ROOTS, AND OTHER DELETERIOUS MATERIALS.

PART 2 – PRODUCTS

2.1 MATERIALS

A. SATISFACTORY SOIL MATERIAL: REQUIREMENTS FOR SATISFACTORY SOIL MATERIAL ARE SPECIFIED IN SECTION 31 20 00 "EARTH MOVING."

1. OBTAIN APPROVED BORROW SOIL MATERIAL OFF-SITE WHEN SATISFACTORY SOIL MATERIAL IS NOT AVAILABLE ON-SITE.

PART 3 – EXECUTION

3.1 PREPARATION

A. PROTECT AND MAINTAIN BENCHMARKS AND SURVEY CONTROL POINTS FROM DISTURBANCE DURING CONSTRUCTION.

B. LOCATE AND CLEARLY IDENTIFY TREES, SHRUBS, AND OTHER VEGETATION TO REMAIN OR TO BE RELOCATED.

C. PROTECT EXISTING SITE IMPROVEMENTS TO REMAIN FROM DAMAGE DURING CONSTRUCTION.

1. RESTORE DAMAGED IMPROVEMENTS TO THEIR ORIGINAL CONDITION, AS ACCEPTABLE TO OWNER.

3.2 TEMPORARY EROSION AND SEDIMENTATION CONTROL

A. PROVIDE TEMPORARY EROSION- AND SEDIMENTATION-CONTROL MEASURES. REQUIREMENTS FOR TEMPORARY EROSION-AND-SEDIMENTATION-CONTROL ARE SPECIFIED IN SECTION 31 25 00 "EROSION AND SEDIMENTATION CONTROLS."

3.3 TREE AND VEGETATION PROTECTION

A. GENERAL: PROTECT TREES AND PLANTS REMAINING ON-SITE ACCORDING TO REQUIREMENTS BELOW.

B. ERECT AND MAINTAIN TEMPORARY FENCING AROUND TREE PROTECTION ZONES BEFORE STARTING SITE CLEARING. REMOVE FENCE WHEN CONSTRUCTION IS COMPLETE.

C. DO NOT EXCAVATE WITHIN TREE PROTECTION ZONES, UNLESS OTHERWISE INDICATED.

D. REPAIR OR REPLACE TREES, SHRUBS, AND OTHER VEGETATION INDICATED TO REMAIN OR BE RELOCATED THAT ARE DAMAGED BY CONSTRUCTION OPERATIONS, IN A MANNER APPROVED BY OWNER.

E. WHERE EXCAVATION FOR NEW CONSTRUCTION IS REQUIRED WITHIN DRIP LINE OF TREES, HAND CLEAR AND EXCAVATE TO MINIMIZE DAMAGE TO ROOT SYSTEMS. USE NARROW-TINE SPADING FORKS, COMB SOIL TO EXPOSE ROOTS, AND CLEANLY CUT ROOTS AS CLOSE TO EXCAVATION AS POSSIBLE.

1. COVER EXPOSED ROOTS WITH BURLAP AND WATER REGULARLY.
2. TEMPORARILY SUPPORT AND PROTECT ROOTS FROM DAMAGE UNTIL THEY ARE PERMANENTLY RELOCATED AND COVERED WITH SOIL.
3. COAT CUT FACES OF ROOTS MORE THAN 1-1/2 INCHES IN DIAMETER WITH AN EMULSIFIED ASPHALT OR OTHER APPROVED COATING FORMULATED FOR USE ON DAMAGED PLANT TISSUES.
4. COVER EXPOSED ROOTS WITH WET BURLAP TO PREVENT ROOTS FROM DRYING OUT. BACKFILL WITH SOIL AS SOON AS POSSIBLE.

3.4 UTILITIES

A. LOCATE, IDENTIFY, DISCONNECT, AND SEAL OR CAP UTILITIES INDICATED TO BE REMOVED OR ABANDONED IN PLACE.

1. ARRANGE WITH UTILITY COMPANIES TO SHUT OFF INDICATED UTILITIES.

B. INTERRUPTING EXISTING UTILITIES: DO NOT INTERRUPT UTILITIES SERVING FACILITIES OCCUPIED BY OWNER OR OTHERS UNLESS PERMITTED IN WRITING BY ARCHITECT AND THEN ONLY AFTER ARRANGING TO PROVIDE TEMPORARY UTILITY SERVICES ACCORDING TO REQUIREMENTS INDICATED:

1. NOTIFY OWNER NOT LESS THAN TWO DAYS IN ADVANCE OF PROPOSED UTILITY INTERRUPTIONS.
2. DO NOT PROCEED WITH UTILITY INTERRUPTIONS WITHOUT OWNER'S WRITTEN PERMISSION.

C. EXCAVATE FOR AND REMOVE UNDERGROUND UTILITIES INDICATED TO BE REMOVED.

3.5 CLEARING AND GRUBBING

A. REMOVE OBSTRUCTIONS, TREES, SHRUBS, AND OTHER VEGETATION TO PERMIT INSTALLATION OF NEW CONSTRUCTION. REMOVAL INCLUDES DIGGING OUT STUMPS AND OBSTRUCTIONS AND GRUBBING ROOTS.

1. DO NOT REMOVE TREES, SHRUBS, AND OTHER VEGETATION INDICATED TO REMAIN OR BE RELOCATED.

2. CUT MINOR ROOTS AND BRANCHES OF TREES INDICATED TO REMAIN IN A CLEAN AND CAREFUL MANNER WHERE SUCH ROOTS AND BRANCHES OBSTRUCT INSTALLATION OF NEW CONSTRUCTION.

3. COMPLETELY REMOVE STUMPS AND REMOVE ROOTS, OBSTRUCTIONS, AND DEBRIS TO A DEPTH OF 18 INCHES BELOW EXPOSED SUBGRADE.

4. USE ONLY HAND METHODS FOR GRUBBING WITHIN PROTECTION ZONES.

B. FILL DEPRESSIONS CAUSED BY CLEARING AND GRUBBING OPERATIONS WITH SATISFACTORY SOIL MATERIAL UNLESS FURTHER EXCAVATION OR EARTHWORK IS INDICATED.

1. PLACE FILL MATERIAL IN HORIZONTAL LAYERS NOT EXCEEDING A LOOSE DEPTH OF 8 INCHES, AND COMPACT EACH LAYER TO A DENSITY EQUAL TO ADJACENT ORIGINAL GROUND.

3.6 TOPSOIL STRIPPING

A. REMOVE SOD AND GRASS BEFORE STRIPPING TOPSOIL.

B. STRIP TOPSOIL TO DEPTH OF 6 INCHES IN A MANNER TO PREVENT INTERMINGLING WITH UNDERLYING SUBSOIL OR OTHER WASTE MATERIALS.

C. STOCKPILE TOPSOIL AWAY FROM EDGE OF EXCAVATIONS WITHOUT INTERMIXING WITH SUBSOIL. GRADE AND SHAPE STOCKPILES TO DRAIN SURFACE WATER. COVER TO PREVENT WINDBLOWN DUST AND EROSION BY WATER.

3.7 SITE IMPROVEMENTS

A. REMOVE EXISTING ABOVE- AND BELOW-GRADE IMPROVEMENTS AS INDICATED AND NECESSARY TO FACILITATE NEW CONSTRUCTION.

B. REMOVE SLABS, PAVING, CURBS, AND GUTTERS AT EXISTING FULL-DEPTH JOINTS UNLESS INDICATED OTHERWISE. NEATLY SAW-CUT LENGTH OF EXISTING PAVEMENT TO REMAIN WITH VERTICAL FACES PRIOR TO REMOVING EXISTING PAVEMENT.

3.8 DISPOSAL OF SURPLUS AND WASTE MATERIALS

A. REMOVE SURPLUS SOIL MATERIAL, UNSUITABLE TOPSOIL, OBSTRUCTIONS, DEMOLISHED MATERIALS, AND WASTE MATERIALS INCLUDING TRASH AND DEBRIS, AND LEGALLY DISPOSE OF THEM OFF OWNER'S PROPERTY.

B. SEPARATE RECYCLABLE MATERIALS PRODUCED DURING SITE CLEARING FROM OTHER NONRECYCLABLE MATERIALS. STORE OR STOCKPILE WITHOUT INTERMIXING WITH OTHER MATERIALS AND TRANSPORT THEM TO RECYCLING FACILITIES. DO NOT INTERFERE WITH OTHER PROJECT WORK.

END OF SECTION 31 10 00

EARTH MOVING

31 20 00 – EARTH MOVING

PART 1 – GENERAL

1.1 SUMMARY

A. SECTION INCLUDES:

1. PREPARING SUBGRADES
2. BASE COURSE AND SUBBASE COURSE FOR CONCRETE WALKS AND PAVING.
3. BASE COURSE AND SUBBASE COURSE FOR ASPHALT PAVING.

1.2 SUBMITTALS

A. PRODUCT DATA.

B. AGGREGATE SIEVE ANALYSIS.

1.3 DEFINITIONS

A. BASE COURSE: COURSE PLACED BETWEEN THE SUBGRADE AND CONCRETE, OR HOT-MIX ASPHALT PAVING.

B. BORROW SOIL: SATISFACTORY SOIL IMPORTED FROM OFF-SITE FOR USE AS FILL OR BACKFILL.

C. EXCAVATION: REMOVAL OF MATERIAL ENCOUNTERED ABOVE SUBGRADE ELEVATIONS AND TO LINES AND DIMENSIONS INDICATED.

1. AUTHORIZED ADDITIONAL EXCAVATION: EXCAVATION BELOW SUBGRADE ELEVATIONS OR BEYOND INDICATED LINES AND DIMENSIONS AS DIRECTED BY ARCHITECT. AUTHORIZED ADDITIONAL EXCAVATION AND REPLACEMENT MATERIAL WILL BE PAID FOR ACCORDING TO CONTRACT PROVISIONS FOR CHANGES IN THE WORK.
2. UNAUTHORIZED EXCAVATION: EXCAVATION BELOW SUBGRADE ELEVATIONS OR BEYOND INDICATED LINES AND DIMENSIONS WITHOUT DIRECTION BY ARCHITECT. UNAUTHORIZED EXCAVATION, AS WELL AS REMEDIAL WORK DIRECTED BY ARCHITECT, SHALL BE WITHOUT ADDITIONAL COMPENSATION.

D. FILL: SOIL MATERIALS USED TO RAISE EXISTING GRADES.

E. SUBGRADE: SURFACE OR ELEVATION REMAINING AFTER COMPLETING EXCAVATION, OR THE TOP SURFACE OF A FILL OR BACKFILL IMMEDIATELY BELOW SUBBASE, DRAINAGE FILL, DRAINAGE COURSE, OR TOPSOIL MATERIALS.

F. UNIFIED SOIL CLASSIFICATION SYSTEM:

1. GW: WELL-GRADED GRAVELS; GRAVEL/SAND MIXTURES WITH LITTLE OR NO FINES.
2. GP: POORLY-GRADED GRAVELS; GRAVEL/SAND MIXTURES WITH LITTLE OR NO FINES.
3. GM: SILTY GRAVELS; POORLY-GRADED GRAVEL/SAND/SILT MIXTURES.
4. GC: CLAYEY GRAVELS; POORLY-GRADED GRAVEL/SAND/CLAY MIXTURES.
5. SW: WELL-GRADED SANDS; GRAVELLY SANDS WITH LITTLE OR NO FINES.
6. SP: POORLY-GRADED SANDS; GRAVELLY SANDS WITH LITTLE OR NO FINES.
7. SM: SILTY SANDS; POORLY, GRADED- SAND/GRAVEL/SILT MIXTURES.
8. SC: CLAYEY SANDS; POORLY-GRADED SAND/GRAVEL/CLAY MIXTURES.
9. ML: INORGANIC SILTS; SANDY, GRAVELLY, OR CLAYEY SILTS.
10. CL: LEAN CLAYS; INORGANIC, GRAVELLY, SANDY, OR SILTY, LOW TO MEDIUM-PLASTICITY CLAYS.
11. OL: ORGANIC, LOW-PLASTICITY CLAYS AND SILTS.
12. MH: INORGANIC, ELASTIC SILTS; SANDY, GRAVELLY OR CLAYEY ELASTIC SILTS
13. CH: FAT CLAYS; HIGH-PLASTICITY, INORGANIC CLAYS.
14. OH: ORGANIC, MEDIUM TO HIGH-PLASTICITY CLAYS AND SILTS
15. PT: PEAT, HUMUS, HYDRIC SOILS WITH HIGH ORGANIC CONTENT.

1.4 PROJECT CONDITIONS

A. UTILITY LOCATOR SERVICE: NOTIFY UTILITY LOCATOR SERVICE FOR AREA WHERE PROJECT IS LOCATED BEFORE BEGINNING EARTH MOVING OPERATIONS.

B. EXISTING UTILITIES: DO NOT INTERRUPT UTILITIES SERVING FACILITIES OCCUPIED BY OWNER OR OTHERS UNLESS PERMITTED IN WRITING BY ARCHITECT AND THEN ONLY AFTER ARRANGING TO PROVIDE TEMPORARY UTILITY SERVICES ACCORDING TO REQUIREMENTS INDICATED.

C. SITE INFORMATION: RESEARCH PUBLIC UTILITY RECORDS AND VERIFY EXISTING UTILITY LOCATIONS PRIOR TO ORDERING ANY MATERIAL. NOTIFY THE ARCHITECT IMMEDIATELY IF ANY DISCREPANCIES ARE FOUND IN THE PROJECT SURVEY.

PART 2 – PRODUCTS

2.1 SOIL MATERIALS

A. GENERAL: PROVIDE BORROW SOIL MATERIALS WHEN SUFFICIENT SATISFACTORY SOIL MATERIALS ARE NOT AVAILABLE FROM EXCAVATIONS.

B. SATISFACTORY SOILS: SOIL CLASSIFICATION GROUPS GW, GP, GM, SW, SP, AND SM ACCORDING TO ASTM D 2487, OR A COMBINATION OF THESE GROUPS; FREE OF ROCK OR GRAVEL LARGER THAN 3 INCHES IN ANY DIMENSION, DEBRIS, WASTE, FROZEN MATERIALS, VEGETATION, AND OTHER DELETERIOUS MATTER.

C. UNSATISFACTORY SOILS: SOIL CLASSIFICATION GROUPS GC, SC, CL, ML, OL, CH, MH, OH, AND PT ACCORDING TO ASTM D 2487, OR A COMBINATION OF THESE GROUPS.

1. UNSATISFACTORY SOILS ALSO INCLUDE SATISFACTORY SOILS NOT MAINTAINED WITHIN 2 PERCENT OF OPTIMUM MOISTURE CONTENT AT TIME OF COMPACTION.

D. BASE COURSE: NATURALLY OR ARTIFICIALLY GRADED MIXTURE OF NATURAL OR CRUSHED GRAVEL, CRUSHED STONE, AND NATURAL OR CRUSHED SAND; ASTM D 2940; WITH AT LEAST 95 PERCENT PASSING A 1-1/2-INCH SIEVE AND NOT MORE THAN 8 PERCENT PASSING A NO. 200 SIEVE OR USE OREGON STANDARD SPECIFICATIONS FOR CONSTRUCTION 3/4-INCH-0" BASE AGGREGATE.

E. ENGINEERED FILL: NATURALLY OR ARTIFICIALLY GRADED MIXTURE OF NATURAL OR CRUSHED GRAVEL, CRUSHED STONE, AND NATURAL OR CRUSHED SAND; ASTM D 2940; WITH AT LEAST 90 PERCENT PASSING A 3-INCH SIEVE AND NOT MORE THAN 12 PERCENT PASSING A NO. 200 SIEVE.

F. BACKFILL AND FILL:

1. SATISFACTORY SOIL MATERIALS

2.2 ACCESSORIES

A. SEPARATION FABRIC: WOVEN GEOTEXTILE, SPECIFICALLY MANUFACTURED AS A SEPARATION GEOTEXTILE, MADE FROM POLYOLEFINS, POLYESTERS, OR POLYAMIDES; AND WITH THE FOLLOWING MINIMUM PROPERTIES DETERMINED ACCORDING TO ASTM D 4759 AND REFERENCED STANDARD TEST METHODS:

EARTH MOVING

1. GRAB TENSILE STRENGTH: 180 LBF ; ASTM D 4632.
2. TEAR STRENGTH: 68 LBF ; ASTM D 4533.
3. PUNCTURE STRENGTH: 371 LBF ; ASTM D 4833.
4. APPARENT OPENING SIZE: NO. 30; ASTM D 4751.

PART 3 – EXECUTION

3.1 PREPARATION

A. PROTECT STRUCTURES, UTILITIES, SIDEWALKS, PAVEMENTS, AND OTHER FACILITIES FROM DAMAGE CAUSED BY SETTLEMENT, LATERAL MOVEMENT, UNDERMINING, WASHOUT, AND OTHER HAZARDS CREATED BY EARTH MOVING OPERATIONS. PROVIDE PROTECTIVE INSULATING MATERIALS AS NECESSARY.

B. PREPARATION OF SUBGRADE FOR EARTHWORK OPERATIONS INCLUDING REMOVAL OF VEGETATION, TOPSOIL, DEBRIS, OBSTRUCTIONS, AND DELETERIOUS MATERIALS FROM GROUND SURFACE IS SPECIFIED IN DIVISION 31 SECTION "SITE CLEARING."

C. PROTECT AND MAINTAIN EROSION AND SEDIMENTATION CONTROLS, WHICH ARE SPECIFIED IN DIVISION 31 SECTION "SITE CLEARING" DURING EARTH MOVING OPERATIONS.

D. PREVENT SURFACE WATER AND GROUND WATER FROM ENTERING EXCAVATIONS, FROM PONDING ON PREPARED SUBGRADES, AND FROM FLOODING PROJECT SITE AND SURROUNDING AREA.

E. PROTECT SUBGRADES AND FOUNDATION SOILS FROM FREEZING TEMPERATURES AND FROST. REMOVE TEMPORARY PROTECTION BEFORE PLACING SUBSEQUENT MATERIALS.

F. PROTECT SUBGRADES FROM SOFTENING, UNDERMINING, WASHOUT, AND DAMAGE BY RAIN OR WATER ACCUMULATION.

3.2 EXCAVATION

A. UNCLASSIFIED EXCAVATION: EXCAVATE TO SUBGRADE ELEVATIONS REGARDLESS OF THE CHARACTER OF SURFACE AND SUBSURFACE CONDITIONS ENCOUNTERED. UNCLASSIFIED EXCAVATED MATERIALS MAY INCLUDE ROCK, SOIL MATERIALS, AND OBSTRUCTIONS. NO CHANGES IN THE CONTRACT SUM OR THE CONTRACT TIME WILL BE AUTHORIZED FOR ROCK EXCAVATION OR REMOVAL OF OBSTRUCTIONS WITHOUT PRIOR APPROVAL BY THE ARCHITECT.

1. IF EXCAVATED MATERIALS INTENDED FOR FILL AND BACKFILL INCLUDE UNSATISFACTORY SOIL MATERIALS AND ROCK, REPLACE WITH SATISFACTORY SOIL MATERIALS.

3.3 EXCAVATION FOR WALKS AND PAVEMENTS

A. EXCAVATE SURFACES UNDER WALKS AND PAVEMENTS TO INDICATED LINES, CROSS SECTIONS, ELEVATIONS, AND SUBGRADES.

3.4 SUBGRADE INSPECTION

A. PROOF-ROLL SUBGRADE WITH A PNEUMATIC-TIRED DUMP TRUCK TO IDENTIFY SOFT POCKETS AND AREAS OF EXCESS YIELDING. DO NOT PROOF-ROLL WET OR SATURATED SUBGRADES. DO NOT PROOF-ROLL SUBGRADE IN INFILTRATION FACILITIES.

B. SOFT POCKETS AND AREAS OF EXCESS YIELDING THAT HAVE BEEN IDENTIFIED SHALL BE SCARIFIED AND MOISTENED OR AERATED, OR REMOVED AND REPLACED WITH SUITABLE SOIL MATERIALS TO THE DEPTH REQUIRED. RE-COMPACT AND RETEST UNTIL SPECIFIED COMPACTION IS OBTAINED.

C. RECONSTRUCT SUBGRADES DAMAGED BY FREEZING TEMPERATURES, FROST, RAIN, ACCUMULATED WATER, OR CONSTRUCTION ACTIVITIES, AS DIRECTED BY ARCHITECT, WITHOUT ADDITIONAL COMPENSATION.

3.5 UNAUTHORIZED EXCAVATION

A. FILL UNAUTHORIZED EXCAVATION UNDER FOUNDATIONS OR WALL FOOTINGS BY EXTENDING BOTTOM ELEVATION OF CONCRETE FOUNDATION OR FOOTING TO EXCAVATION BOTTOM, WITHOUT ALTERING TOP ELEVATION. LEAN CONCRETE FILL, WITH 28-DAY COMPRESSIVE STRENGTH OF 2500 PSI, MAY BE USED WHEN APPROVED BY ARCHITECT.

1. FILL UNAUTHORIZED EXCAVATIONS UNDER OTHER CONSTRUCTION, PIPE, OR CONDUIT AS DIRECTED BY ARCHITECT.

3.6 STORAGE OF SOIL MATERIALS

A. STOCKPILE BORROW SOIL MATERIALS AND EXCAVATED SATISFACTORY SOIL MATERIALS WITHOUT INTERMIXING. PLACE GRADE, AND SHAPE STOCKPILES TO DRAIN SURFACE WATER. COVER TO PREVENT WINDBLOWN DUST.

1. STOCKPILE SOIL MATERIALS AWAY FROM EDGE OF EXCAVATIONS. DO NOT STORE WITHIN DRIP LINE OF REMAINING TREES.

3.7 BACKFILLS AND FILLS

A. BACKFILL: PLACE AND COMPACT BACKFILL IN EXCAVATIONS PROMPTLY, BUT NOT BEFORE COMPLETING THE FOLLOWING:

1. CONSTRUCTION BELOW FINISH GRADE INCLUDING, WHERE APPLICABLE, DAMPPROOFING, WATERPROOFING, AND PERIMETER INSULATION.
2. SURVEYING LOCATIONS OF UNDERGROUND UTILITIES FOR RECORD DOCUMENTS.
3. INSPECTING AND TESTING UNDERGROUND UTILITIES.
4. REMOVING CONCRETE FORMWORK.
5. REMOVING TRASH AND DEBRIS.
6. REMOVING TEMPORARY SHORING AND BRACING, AND SHEETING.
7. INSTALLING PERMANENT OR TEMPORARY HORIZONTAL BRACING ON HORIZONTALLY SUPPORTED WALLS.

3.8 SOIL FILL

A. PLOW, SCARIFY, BENCH, OR BREAK UP SLOPED SURFACES STEEPER THAN 1 VERTICAL TO 4 HORIZONTAL SO FILL MATERIAL WILL BOND WITH EXISTING MATERIAL.

B. PLACE AND COMPACT FILL MATERIAL IN LAYERS TO REQUIRED ELEVATIONS AS FOLLOWS:

1. UNDER GRASS AND PLANTED AREAS, USE SATISFACTORY SOIL MATERIAL.
2. UNDER WALKS AND PAVEMENTS, USE SATISFACTORY SOIL MATERIAL.
3. UNDER STEPS AND RAMPS, USE ENGINEERED FILL.

3.9 SOIL MOISTURE CONTROL

A. UNIFORMLY MOISTEN OR AERATE SUBGRADE AND EACH SUBSEQUENT FILL OR BACKFILL SOIL LAYER BEFORE COMPACTION TO WITHIN 2 PERCENT OF OPTIMUM MOISTURE CONTENT.

1. DO NOT PLACE BACKFILL OR FILL SOIL MATERIAL ON SURFACES THAT ARE MUDDY, FROZEN, OR CONTAIN FROST OR ICE.
2. REMOVE AND REPLACE, OR SCARIFY AND AIR DRY, OTHERWISE SATISFACTORY SOIL MATERIAL THAT EXCEEDS OPTIMUM MOISTURE CONTENT BY 3 PERCENT AND IS TOO WET TO COMPACT TO SPECIFIED DRY UNIT WEIGHT.

3.10 COMPACTION OF SOIL BACKFILLS AND FILLS

A. PLACE BACKFILL AND FILL SOIL MATERIALS IN LAYERS NOT MORE THAN 8 INCHES N LOOSE DEPTH FOR MATERIAL COMPACTED BY HEAVY COMPACTION EQUIPMENT, AND NOT MORE THAN 4 INCHES IN LOOSE DEPTH FOR MATERIAL COMPACTED BY HAND-OPERATED TAMPERS.

B. PLACE BACKFILL AND FILL SOIL MATERIALS EVENLY ON ALL SIDES OF STRUCTURES TO REQUIRED ELEVATIONS, AND UNIFORMLY ALONG THE FULL LENGTH OF EACH STRUCTURE.

C. COMPACT SOIL MATERIALS TO NOT LESS THAN THE FOLLOWING PERCENTAGES OF MAXIMUM DRY UNIT WEIGHT ACCORDING TO ASTM D 698:

1. UNDER STRUCTURES, BUILDING SLABS, STEPS, AND PAVEMENTS, SCARIFY AND RECOMPACT TOP 12 INCHES OF EXISTING SUBGRADE AND EACH LAYER OF BACKFILL OR FILL SOIL MATERIAL AT 95 PERCENT.
2. UNDER WALKWAYS, SCARIFY AND RECOMPACT TOP 6 INCHES BELOW SUBGRADE AND COMPACT EACH LAYER OF BACKFILL OR FILL SOIL MATERIAL AT 92 PERCENT.
3. UNDER TURF OR UNPAVED AREAS, SCARIFY AND RECOMPACT TOP 6 INCHES BELOW SUBGRADE AND COMPACT EACH LAYER OF BACKFILL OR FILL SOIL MATERIAL AT 85 PERCENT.

3.11 GRADING

A. GENERAL: UNIFORMLY GRADE AREAS TO A SMOOTH SURFACE, FREE OF IRREGULAR SURFACE CHANGES. COMPLY WITH COMPACTION REQUIREMENTS AND GRADE TO CROSS SECTIONS, LINES, AND ELEVATIONS INDICATED.

B. SITE ROUGH GRADING: SLOPE GRADES TO DIRECT WATER AWAY FROM BUILDINGS AND TO PREVENT PONDING.

1. TURF OR UNPAVED AREAS: PLUS OR MINUS 1 INCH.
2. WALKS: PLUS OR MINUS 1/2 INCH.
3. PAVEMENTS: PLUS OR MINUS 1/2 INCH.

3.12 BASE COURSES UNDER PAVEMENTS AND WALKS

A. PLACE BASE COURSE ON SUBGRADES FREE OF MUD, FROST, SNOW, OR ICE.

B. ON PREPARED SUBGRADE, PLACE BASE COURSE UNDER PAVEMENTS AND WALKS AS FOLLOWS:

1. SHAPE BASE COURSE TO REQUIRED CROWN ELEVATIONS AND CROSS-SLOPE GRADES.

2. PLACE BASE COURSE THAT EXCEEDS 6 INCHES IN COMPACTED THICKNESS IN LAYERS OF EQUAL THICKNESS, WITH NO COMPACTED LAYER MORE THAN 6 INCHES THICK OR LESS THAN 3 INCHES THICK.

3. COMPACT BASE COURSE AT OPTIMUM MOISTURE CONTENT TO REQUIRED GRADES, LINES, CROSS SECTIONS, AND THICKNESS TO NOT LESS THAN 95 PERCENT OF MAXIMUM DRY UNIT WEIGHT ACCORDING TO ASTM D 698.

3.13 FIELD QUALITY CONTROL

A. TESTING AGENCY: CONTRACTOR WILL ENGAGE A QUALIFIED GEOTECHNICAL ENGINEERING TESTING AGENCY TO PERFORM TESTS AND INSPECTIONS.

B. ALLOW TESTING AGENCY TO INSPECT AND TEST SUBGRADES AND EACH FILL OR BACKFILL LAYER. PROCEED WITH SUBSEQUENT EARTH MOVING ONLY AFTER TEST RESULTS FOR PREVIOUSLY COMPLETED WORK COMPLY WITH REQUIREMENTS.

C. TESTING AGENCY WILL TEST COMPACTION OF SOILS IN PLACE ACCORDING TO ASTM D 1556, ASTM D 2167, ASTM D 2922, ASTM D 2937, AS APPLICABLE. TESTS WILL BE PERFORMED AT THE FOLLOWING LOCATIONS AND FREQUENCIES:

1. PAVED AND BUILDING SLAB AREAS: AT SUBGRADE AND AT EACH COMPACTED FILL AND BACKFILL LAYER, AT LEAST ONE TEST FOR EVERY 2000 SQ. FT. OR LESS OF PAVED AREA OR BUILDING SLAB, BUT IN NO CASE FEWER THAN THREE TESTS.

D. WITH THE APPROVAL OF THE ENGINEER, PROOF-ROLL TESTING OF SUBGRADE AND/OR AGGREGATE BASE MAY BE SUBSTITUTED FOR OTHER COMPACTION TESTING.

E. WHEN TESTING AGENCY REPORTS THAT SUBGRADES, FILLS, OR BACKFILLS HAVE NOT ACHIEVED DEGREE OF COMPACTION SPECIFIED, SCARIFY AND MOISTEN OR AERATE, OR REMOVE AND REPLACE SOIL MATERIALS TO DEPTH REQUIRED; RECOMPACT AND RETEST UNTIL SPECIFIED COMPACTION IS OBTAINED.

3.14 PROTECTION

A. PROTECTING GRADED AREAS: PROTECT NEWLY GRADED AREAS FROM TRAFFIC, FREEZING, AND EROSION. KEEP FREE OF TRASH AND DEBRIS.

B. REPAIR AND REESTABLISH GRADES TO SPECIFIED TOLERANCES WHERE COMPLETED OR PARTIALLY COMPLETED SURFACES BECOME ERODED, RUTTED, SETTLED, OR WHERE THEY LOSE COMPACTION DUE TO SUBSEQUENT CONSTRUCTION OPERATIONS OR WEATHER CONDITIONS.

C. WHERE SETTLING OCCURS BEFORE PROJECT CORRECTION PERIOD ELAPSES, REMOVE FINISHED SURFACING, BACKFILL WITH ADDITIONAL SOIL MATERIAL, COMPACT, AND RECONSTRUCT SURFACING.

1. RESTORE APPEARANCE, QUALITY, AND CONDITION OF FINISHED SURFACING TO MATCH ADJACENT WORK, AND ELIMINATE EVIDENCE OF RESTORATION TO GREATEST EXTENT POSSIBLE.

D. WEATHER PERMITTING AND AS APPROVED, STORMWATER INFILTRATION FACILITY PLANTS SHALL BE INSTALLED AS SOON AS POSSIBLE AFTER PLACING AND GRADING THE GROWING MEDIA IN ORDER

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TEMPORARY EROSION AND SEDIMENT CONTROL

SECTION 31 25 00 – TEMPORARY EROSION AND SEDIMENT CONTROL

PART 1 – GENERAL

1.1 SUMMARY:

- THIS SECTION INCLUDES THE FOLLOWING:
- PREVENTION OF EROSION DUE TO CONSTRUCTION ACTIVITIES.
- PREVENTION OF SEDIMENTATION OF WATERWAYS, OPEN DRAINAGE WAYS, AND STORM AND SANITARY SEWERS DUE TO CONSTRUCTION ACTIVITIES.

1.2 PERFORMANCE REQUIREMENTS

- COMPLY WITH ALL REQUIREMENTS OF U.S. ENVIRONMENTAL PROTECTION AGENCY FOR EROSION AND SEDIMENTATION CONTROL, AS SPECIFIED FOR THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES), UNDER REQUIREMENTS FOR THE 2012 GENERAL PERMIT FOR DISCHARGES FROM CONSTRUCTION ACTIVITIES.
- ALSO COMPLY WITH ALL MORE STRINGENT REQUIREMENTS OF STATE OF OREGON EROSION AND SEDIMENTATION CONTROL MANUAL.
- FOLLOW AN EROSION AND SEDIMENTATION CONTROL PLAN.
- DO NOT BEGIN CLEARING, GRADING, OR OTHER WORK INVOLVING DISTURBANCE OF GROUND SURFACE COVER UNTIL APPLICABLE PERMITS HAVE BEEN OBTAINED; FURNISH ALL DOCUMENTATION REQUIRED TO OBTAIN APPLICABLE PERMITS.
- REVISIONS TO ESCP: KEEP COPIES OF ALL ESCP REVISIONS ON SITE.
- INSPECTIONS:

1. INSPECTIONS MUST BE CONDUCTED BY A PERSON WHO:

- IS KNOWLEDGEABLE IN THE PRINCIPLE AND PRACTICE OF EROSION AND SEDIMENT CONTROLS, AND
 - POSSESSES THE SKILLS TO ASSESS CONDITIONS AT THE CONSTRUCTION SITE THAT COULD IMPACT STORMWATER QUALITY, AND
 - IS KNOWLEDGEABLE IN THE CORRECT INSTALLATION OF THE EROSION AND SEDIMENT CONTROLS, AND
 - IS ABLE TO ASSESS THE EFFECTIVENESS OF SEDIMENT AND EROSION CONTROL MEASURES SELECTED TO CONTROL THE QUALITY OF STORMWATER DISCHARGES FROM THE CONSTRUCTION ACTIVITY.
2. VISUAL MONITORING REQUIREMENT: ALL AREAS OF THE SITE DISTURBED BY CONSTRUCTION ACTIVITY MUST BE INSPECTED TO ENSURE THAT BMPs ARE IN WORKING ORDER. LOCATIONS WHERE VEHICLES ENTER OR EXIT THE SITE SHALL BE INSPECTED FOR EVIDENCE OF OFF-SITE SEDIMENT TRACKING AS WELL AS AREAS USED FOR STORAGE OF MATERIALS THAT ARE EXPOSED TO PRECIPITATION FOR EVIDENCE OF SPILLAGE OR OTHER POTENTIAL TO CONTAMINATE STORMWATER RUNOFF. IN ADDITION, INSPECT ALL DISCHARGE POINTS IDENTIFIED IN THE ESCP FOR EVIDENCE OF OR THE POTENTIAL FOR THE DISCHARGE OF POLLUTANTS, AND TO ASCERTAIN WHETHER EROSION AND SEDIMENT CONTROL MEASURES ARE EFFECTIVE IN PREVENTING SIGNIFICANT IMPACTS TO SURFACE WATERS. WHERE DISCHARGE POINTS ARE INACCESSIBLE, NEARBY DOWNSTREAM LOCATIONS MUST BE INSPECTED TO THE EXTENT THAT SUCH INSPECTIONS ARE PRACTICABLE.
3. ALL ESCP CONTROLS AND PRACTICES MUST BE INSPECTED ACCORDING TO THE FOLLOWING SCHEDULE:

SITE CONDITIONS	MINIMUM FREQUENCY
1. ACTIVE PERIOD	DAILY WHEN STORMWATER RUNOFF, INCLUDING RUNOFF FROM SNOWMELT, IS OCCURRING, AT LEAST ONCE EVERY TWO WEEKS, REGARDLESS OF WHETHER STORMWATER RUNOFF IS OCCURRING.
2. PRIOR TO THE SITE BECOMING INACTIVE OR IN ANTICIPATION OF SITE INACCESSIBILITY	ONCE TO ENSURE THAT EROSION AND SEDIMENT CONTROL MEASURES ARE IN WORKING ORDER. ANY NECESSARY MAINTENANCE AND REPAIR MUST BE MADE PRIOR TO LEAVING THE SITE.
3. INACTIVE PERIODS GREATER THAN 14 CONSECUTIVE CALENDAR DAYS	ONCE EVERY TWO WEEKS.
4. PERIODS DURING WHICH THE SITE IS INACCESSIBLE DUE TO INCLEMENT WEATHER	IF PRACTICAL, INSPECTIONS MUST OCCUR DAILY AT A RELEVANT AND ACCESSIBLE DISCHARGE POINT OR DOWNSTREAM LOCATION.

4. RECORDKEEPING REQUIREMENTS: DOCUMENT ALL VISUAL INSPECTIONS IN AN ONSITE LOGBOOK. IF THERE ARE NO FINDINGS, SIMPLY RECORD THE INSPECTION DATE, AND INSPECTOR'S NAME. IN ADDITION, RECORD ANY FINDINGS, INCLUDING:

- AT THE DESIGNATED DISCHARGE LOCATION(S):
 - WHERE TO MAKE OBSERVATIONS:
 - AT THE DISCHARGE LOCATION IF THE DISCHARGE IS TO A CONVEYANCE SYSTEM LEADING TO SURFACE WATERS;
 - FROM THE DISCHARGE POINT TO 50 FEET DOWNSTREAM IF THE DISCHARGE IS TO SURFACE WATERS; AND
 - AT ANY LOCATION WHERE MORE THAN 1/2 OF THE WIDTH OF THE RECEIVING SURFACE WATER IS AFFECTED.
 - HOW TO MAKE OBSERVATIONS:
 - FOR TURBIDITY AND COLOR, DESCRIBE ANY APPARENT COLOR AND THE CLARITY OF THE DISCHARGE, AND ANY APPARENT DIFFERENCE IN COMPARISON WITH SURFACE WATERS.
 - DESCRIBE ANY SHEEN OR FLOATING MATERIAL, OR RECORD THAT IT IS ABSENT. IF PRESENT, IT COULD INDICATE CONCERN ABOUT A POSSIBLE SPILL OR LEAKAGE FROM VEHICLES OR MATERIALS STORAGE.
- IF A SITE IS INACCESSIBLE DUE TO INCLEMENT WEATHER, RECORD THE INSPECTIONS NOTED AT A RELEVANT DISCHARGE POINT OR DOWNSTREAM LOCATION, IF PRACTICAL.
- LOCATIONS OF BMPs THAT NEED TO BE MAINTAINED, INSPECTIONS OF ALL BMPs, INCLUDING EROSION AND SEDIMENT CONTROLS, CHEMICAL AND WASTE CONTROLS, LOCATIONS WHERE VEHICLES ENTER AND EXIT THE SITE, STATUS OF AREAS THAT EMPLOY TEMPORARY OR FINAL STABILIZATION CONTROL, SOIL STOCKPILE AREA, AND NON-STORMWATER POLLUTION (E.G. PAINTS, OILS, FUELS, ADHESIVES) CONTROLS.
- LOCATIONS OF BMPs THAT FAILED TO OPERATE AS DESIGNED OR PROVED INADEQUATE FOR A PARTICULAR LOCATION;
- LOCATIONS WHERE ADDITIONAL BMPs ARE NEEDED THAT DID NOT EXIST AT THE TIME OF INSPECTION; AND
- CORRECTIVE ACTION REQUIRED AND IMPLEMENTATION DATES.
- ALL INSPECTION RECORDS AND MONITORING RESULTS MUST BE KEPT ON SITE AND MAINTAINED BY THE PERMIT REGISTRANT. THE RECORDS SHALL LIST THE CONSTRUCTION SITE NAME AS IT APPEARS ON THE REGISTRANT'S PERMIT AND THE FILE OR SITE NUMBER. THESE RECORDS MUST BE MADE AVAILABLE TO DEQ, AGENT, OR LOCAL MUNICIPALITY UPON REQUEST. THESE RECORDS MUST BE DELIVERED OR MADE AVAILABLE TO DEQ WITHIN 3 WORKING DAYS OF REQUEST. THESE INSPECTION RECORDS AND MONITORING RESULTS MUST BE MAINTAINED FOR AT LEAST 3 YEARS AFTER PROJECT COMPLETION. IN ADDITION, A COPY OF THE ESCP AND REVISIONS MUST BE RETAINED ON SITE AND MADE AVAILABLE ON REQUEST TO THE DEQ, AGENT, OR THE LOCAL MUNICIPALITY. DURING INACTIVE PERIODS OF GREATER THAN 7 CONSECUTIVE CALENDAR DAYS, THE ESCP MUST BE RETAINED BY THE PERMIT REGISTRANT BUT DOES NOT NEED TO BE AT THE CONSTRUCTION SITE.

G. EROSION ON-SITE: MINIMIZE WIND, WATER, AND VEHICULAR EROSION OF SOIL ON PROJECT SITE DUE TO CONSTRUCTION ACTIVITIES FOR THIS PROJECT.

- CONTROL MOVEMENT OF SEDIMENT AND SOIL FROM TEMPORARY STOCKPILES OF SOIL.
- PREVENT DEVELOPMENT OF RUTS DUE TO EQUIPMENT AND VEHICULAR TRAFFIC.
- IF EROSION OCCURS DUE TO NON-COMPLIANCE WITH THESE REQUIREMENTS, RESTORE ERODED AREAS AT NO COST TO OWNER.

H. EROSION OFF-SITE: PREVENT EROSION OF SOIL AND DEPOSITION OF SEDIMENT ON OTHER PROPERTIES DUE TO CONSTRUCTION ACTIVITIES FOR THIS PROJECT.

- PREVENT WINDBLOWN SOIL FROM LEAVING THE PROJECT SITE.
- PREVENT TRACKING OF MUD ONTO PUBLIC ROADS OUTSIDE SITE.
- PREVENT MUD AND SEDIMENT FROM FLOWING ONTO SIDEWALKS AND PAVEMENTS.
- IF EROSION OCCURS DUE TO NON-COMPLIANCE WITH THESE REQUIREMENTS, RESTORE ERODED AREAS AT NO COST TO OWNER.

I. SEDIMENTATION OF WATERWAYS ON SITE: PREVENT SEDIMENTATION OF WATERWAYS ON THE PROJECT SITE, INCLUDING RIVERS, STREAMS, LAKES, PONDS, OPEN DRAINAGE WAYS, STORM SEWERS, AND SANITARY SEWERS.

- IF SEDIMENTATION OCCURS, INSTALL OR CORRECT PREVENTIVE MEASURES IMMEDIATELY AT NO COST TO OWNER; REMOVE DEPOSITED SEDIMENTS; COMPLY WITH REQUIREMENTS OF AUTHORITIES HAVING JURISDICTION.
- IF SEDIMENT BASINS ARE USED AS TEMPORARY PREVENTIVE MEASURES PUMP DRY AND REMOVE DEPOSITED SEDIMENT AFTER EACH STORM.

J. SEDIMENTATION OF WATERWAYS OFF-SITE: PREVENT SEDIMENTATION OF WATERWAYS OFF THE PROJECT SITE, INCLUDING RIVERS, STREAMS, LAKES, PONDS, OPEN DRAINAGE WAYS, STORM SEWERS, AND SANITARY SEWERS.

- IF SEDIMENTATION OCCURS, INSTALL OR CORRECT PREVENTIVE MEASURES IMMEDIATELY AT NO COST TO OWNER; REMOVE DEPOSITED SEDIMENTS; COMPLY WITH REQUIREMENTS OF AUTHORITIES HAVING JURISDICTION.
- OPEN WATER: PREVENT STANDING WATER THAT COULD BECOME STAGNANT.

L. MAINTENANCE: MAINTAIN TEMPORARY PREVENTIVE MEASURES UNTIL PERMANENT MEASURES HAVE BEEN ESTABLISHED.

1.3 SUBMITTALS

- PRODUCT DATA: FOR MATERIALS INDICATED IN ESCP AND ADDITIONAL MATERIALS INCLUDED IN ESCP REVISIONS.
- INSPECTION REPORTS: SUBMIT REPORT OF EACH INSPECTION; IDENTIFY EACH PREVENTIVE MEASURE, INDICATE CONDITION, AND SPECIFY MAINTENANCE OR REPAIR REQUIRED AND ACCOMPLISHED.

PART 2 – PRODUCTS

2.1 MATERIALS

- SILT FENCE FABRIC: POLYPROPYLENE GEOTEXTILE RESISTANT TO COMMON SOIL CHEMICALS, MILDEW, AND INSECTS; NON-Biodegradable; IN LONGEST LENGTHS POSSIBLE; WITH THE FOLLOWING PROPERTIES:
 - AVERAGE OPENING SIZE: 30 U.S. STD. SIEVE, MAXIMUM, WHEN TESTED IN ACCORDANCE WITH ASTM D 4751.
 - PERMITTIVITY: 0.05 SEC⁻¹, MINIMUM, WHEN TESTED IN ACCORDANCE WITH ASTM D 4491.
 - ULTRAVIOLET RESISTANCE: RETAINING AT LEAST 70 PERCENT OF TENSILE STRENGTH, WHEN TESTED IN ACCORDANCE WITH ASTM D 4355 AFTER 500 HOURS EXPOSURE.
 - TENSILE STRENGTH: 100 LB-F, MINIMUM, IN CROSS-MACHINE DIRECTION; 124 LB-F, MINIMUM, IN MACHINE DIRECTION; WHEN TESTED IN ACCORDANCE WITH ASTM D 4632.
 - ELONGATION: 15 TO 30 PERCENT, WHEN TESTED IN ACCORDANCE WITH ASTM D 4632.
 - TEAR STRENGTH: 55 LB-F, MINIMUM, WHEN TESTED IN ACCORDANCE WITH ASTM D 4533.
 - COLOR: MANUFACTURER'S STANDARD, WITH EMBEDMENT AND FASTENER LINES PREPRINTED.
- SILT FENCE POSTS: ONE OF THE FOLLOWING, MINIMUM 4 FEET LONG:
 - STEEL U- OR T-SECTION, WITH MINIMUM MASS OF 1.33 LB PER LINEAR FOOT.
 - SOFTWOOD, 4 BY 4 INCHES IN CROSS-SECTION.
 - HARDWOOD, 2 BY 2 INCHES IN CROSS-SECTION.
- GRAVEL: AS CALLED OUT ON THE DETAILS.
- INLET PROTECTION FILTER SACK: AS SHOWN ON PLANS.
- EROSION CONTROL BLANKETS: AS SHOWN ON PLANS.
- COMPOST SOCKS: MIXED YARD DEBRIS COMPOST-FILLED TUBE OF SYNTHETIC OR COTTON FIBER.
- CONCRETE WASHOUT CONTAINER: TEMPORARY CONTAINMENT SYSTEM FOR CEMENTITIOUS MATERIAL WASH-OUTS.
 - PRODUCT MANUFACTURERS:
 - ECO-PAN
 - OR APPROVED EQUAL
- CONCRETE WASH-OUT PIT: AS SHOWN ON PLANS.

PART 3 – EXECUTION

3.1 EXAMINATION

- EXAMINE SITE AND IDENTIFY EXISTING FEATURES THAT CONTRIBUTE TO EROSION RESISTANCE; MAINTAIN SUCH EXISTING FEATURES TO GREATEST EXTENT POSSIBLE.

3.2 PREPARATION

- SCHEDULE WORK SO THAT SOIL SURFACES ARE LEFT EXPOSED FOR THE MINIMUM AMOUNT OF TIME.

3.3 SCOPE OF PREVENTIVE MEASURES

- IN ALL CASES, IF PERMANENT EROSION RESISTANT MEASURES HAVE BEEN INSTALLED TEMPORARY PREVENTIVE MEASURES ARE NOT REQUIRED.
- CONSTRUCTION ENTRANCES: TRAFFIC-BEARING AGGREGATE SURFACE.
 - WIDTH: AS REQUIRED; TWENTY (20) FEET, MINIMUM.
 - LENGTH: FIFTY (50) FEET, MINIMUM.
 - PROVIDE AT EACH CONSTRUCTION ENTRANCE FROM PUBLIC RIGHT-OF-WAY.
 - WHERE NECESSARY TO PREVENT TRACKING OF MUD ONTO RIGHT-OF-WAY, PROVIDE WHEEL WASHING AREA OUT OF DIRECT TRAFFIC LANE, WITH DRAIN INTO SEDIMENT TRAP OR BASIN.
- LINEAR SEDIMENT BARRIERS: MADE OF SILT FENCES, WATTLES, OR COMPOST SOCKS.
 - PROVIDE LINEAR SEDIMENT BARRIERS:
 - ALONG DOWNHILL PERIMETER EDGE OF DISTURBED AREAS, INCLUDING SOIL STOCKPILES.
- INLET PROTECTION FILTER SACK: PROTECT EACH INLET USING THE FOLLOWING MEASURES:
 - WOVEN FABRIC BAG INSERT SET BENEATH INLET GRATE.
 - BIO-FILTRATION BAGS BLOCKING ENTIRE INLET GRATE AREA.
- TEMPORARY SEEDING: USE WHERE TEMPORARY VEGETATED COVER IS REQUIRED.
- CONCRETE WASH-OUT CONTAINER: USE WHEN THERE IS NOT SUFFICIENT SPACE FOR A TRADITIONAL CONCRETE WASH-OUT PIT.
- CONCRETE WASH-OUT PIT: SIZE AS REQUIRED TO HANDLE ESTIMATED CONCRETE USAGE.

3.4 INSTALLATION

- TEMPORARY TRAFFIC-BEARING AGGREGATE SURFACE:
 - EXCAVATE MINIMUM OF 6 INCHES.
 - PLACE GEOTEXTILE FABRIC FULL WIDTH AND LENGTH, WITH MINIMUM 12 INCH OVERLAP AT JOINTS.
 - PLACE AND COMPACT AT LEAST 6 INCHES OF 1.5 TO 3.5 INCH DIAMETER STONE.
- SILT FENCES:
 - STORE AND HANDLE FABRIC IN ACCORDANCE WITH ASTM D 4873.
 - USE NOMINAL 36 INCH HIGH BARRIERS WITH MINIMUM 48 INCH LONG POSTS SPACED AT 6 FEET MAXIMUM, WITH FABRIC EMBEDDED AT LEAST 6 INCHES IN GROUND.
 - INSTALL WITH TOP OF FABRIC AT NOMINAL HEIGHT AND EMBEDMENT AS SPECIFIED.
 - DO NOT SPlice FABRIC WIDTH; MINIMIZE SPlices IN FABRIC LENGTH; SPlice AT POST ONLY, OVERLAPPING AT LEAST 18 INCHES, WITH EXTRA POST.
 - FASTEN FABRIC TO WOOD POSTS USING ONE OF THE FOLLOWING:
 - INTEGRAL POCKETS.
 - FOUR 3/4 INCH DIAMETER, 1 INCH LONG, 14 GAGE NAILS.
 - FIVE 17-GAGE STAPLES WITH 3/4 INCH WIDE CROWN AND 1/2 INCH LEGS.
 - FASTEN FABRIC TO STEEL POSTS USING WIRE, NYLON CORD, OR INTEGRAL POCKETS.
 - WHEREVER RUNOFF WILL FLOW AROUND END OF BARRIER, PROVIDE TEMPORARY SPLASH PAD OR OTHER OUTLET PROTECTION.
- INLET PROTECTION FILTER SACK:
 - INSTALL PER MANUFACTURER'S RECOMMENDATIONS.

- CONCRETE WASH-OUT CONTAINER:
 - INSTALL PER MANUFACTURER'S RECOMMENDATIONS ON LEVEL GROUND.
 - CONCRETE WASH-OUT PIT:
 - INSTALL AS SHOWN ON PLANS.
- 3.5 MAINTENANCE
- INSPECT PREVENTIVE MEASURES ROUTINELY (DAILY), WITHIN 24 HOURS AFTER THE END OF ANY STORM THAT PRODUCES 0.5 INCHES OR MORE RAINFALL AT THE PROJECT SITE, AND DAILY DURING PROLONGED RAINFALL.
 - REPAIR DEFICIENCIES IMMEDIATELY.
 - SILT FENCES:
 - PROMPTLY REPLACE FABRIC THAT DETERIORATES UNLESS NEED FOR FENCE HAS PASSED.
 - REMOVE SILT DEPOSITS THAT EXCEED ONE-THIRD OF THE HEIGHT OF THE FENCE.
 - REPAIR FENCES THAT ARE UNDERCUT BY RUNOFF OR OTHERWISE DAMAGED, WHETHER BY RUNOFF OR OTHER CAUSES.
 - INLET PROTECTION FILTER SACKS
 - PROMPTLY REPLACE SACKS THAT ARE DAMAGED OR DETERIORATED UNLESS THE NEED HAS PASSED.
 - REMOVE SILT DEPOSITS THAT EXCEED THE CONTAINMENT AREA OF THE SACK.
 - CLEAN OUT TEMPORARY SEDIMENT CONTROL STRUCTURES WEEKLY AND RELOCATE SOIL ON SITE.
 - PLACE SEDIMENT IN APPROPRIATE LOCATIONS ON SITE; DO NOT REMOVE FROM SITE.
 - CONCRETE WASH-OUT CONTAINER: PROPERLY CALL CONTAINER PROVIDER TO PICK UP PAN WHEN FULL AND REPLACE WITH EMPTY PAN OR PROPERLY DISPOSE OF CONCRETE WASTE MATERIAL. CONCRETE WASTE TO BE RECYCLED BY CONTAINER PROVIDER.

- CLEAN UP
- REMOVE TEMPORARY MEASURES AFTER PERMANENT MEASURES HAVE BEEN INSTALLED, UNLESS PERMITTED TO REMAIN BY OWNERS REPRESENTATIVE.
- CLEAN OUT TEMPORARY SEDIMENT CONTROL STRUCTURES THAT ARE TO REMAIN AS PERMANENT

MEASURES.

- WHERE REMOVAL OF TEMPORARY MEASURES WOULD LEAVE EXPOSED SOIL, SHAPE SURFACE TO AN ACCEPTABLE GRADE AND FINISH TO MATCH ADJACENT GROUND SURFACES.

END OF SECTION 31 25 00

ASPHALT PAVING

SECTION 32 12 16 – ASPHALT PAVING

PART 1 – GENERAL

1.1 SUMMARY

- SECTION INCLUDES:
 - HOT-MIX ASPHALT PATCHING.
 - HOT-MIX ASPHALT PAVING.
 - PAVEMENT-MARKING PAINT.
- RELATED REQUIREMENTS:
 - SECTION 31 20 00 "EARTH MOVING" FOR SUBGRADE PREPARATION, FILL MATERIAL, AGGREGATE BASE COURSES, AND AGGREGATE PAVEMENT SHOULDERS.
- SUBMITTALS
- PRODUCT DATA: FOR EACH TYPE OF PRODUCT, INCLUDE TECHNICAL DATA AND TESTED PHYSICAL AND PERFORMANCE PROPERTIES.
 - JOB-MIX DESIGNS: CERTIFICATION, BY AUTHORITIES HAVING JURISDICTION, OF APPROVAL OF EACH JOB MIX PROPOSED FOR THE WORK.
 - JOB-MIX DESIGNS: FOR EACH JOB MIX PROPOSED FOR THE WORK.
- MATERIAL CERTIFICATES: FOR EACH PAVING MATERIAL.
- QUALITY ASSURANCE
- REGULATORY REQUIREMENTS: COMPLY WITH MATERIALS, WORKMANSHIP, AND OTHER APPLICABLE REQUIREMENTS OF SECTION 0744 OF THE 2021 OREGON STANDARD SPECIFICATIONS FOR CONSTRUCTION FOR ASPHALT PAVING WORK.
 - MEASUREMENT AND PAYMENT PROVISIONS AND SAFETY PROGRAM SUBMITTALS INCLUDED IN STANDARD SPECIFICATIONS DO NOT APPLY TO THIS SECTION.

1.2 PROJECT CONDITIONS

- ENVIRONMENTAL LIMITATIONS: DO NOT APPLY ASPHALT MATERIALS IF SUBGRADE IS WET OR EXCESSIVELY DAMP, IF RAIN IS IMMINENT OR EXPECT BEFORE TIME REQUIRED FOR ADEQUATE CURE, OR IF THE FOLLOWING CONDITIONS ARE NOT MET:
 - TACK COAT: MINIMUM SURFACE TEMPERATURE OF 60 DEG F.
 - ASPHALT BASE AND SURFACE COURSE:
 - DENSE GRADED MIXES
 - SURFACE TEMPERATURE
- LESS THAN 2 INCHES
- 2 INCHES – 2 1/2 INCHES
- GREATER THAN 2 1/2 INCHES
- IF PLACING ASPHALT BETWEEN MARCH 15 AND SEPTEMBER 30, TEMPERATURE MAY BE LOWERED 5 DEGREES F.
- DO NOT USE FIELD BURNERS OR OTHER DEVICES TO HEAT THE PAVEMENT TO THE SPECIFIED MINIMUM TEMPERATURE.
- PAVEMENT-MARKING PAINT: PROCEED WITH PAVEMENT MARKING ONLY ON CLEAN, DRY SURFACES AND AT A MINIMUM AMBIENT OR SURFACE TEMPERATURE OF 40 DEG F FOR OIL BASED MATERIALS OR 55 DEG F FOR WATER-BASED MATERIALS, AND NOT EXCEEDING 95 DEG F.

PART 2 – PRODUCTS

2.1 AGGREGATES

- CONFORM TO THE REQUIREMENTS OF 00744 OF THE 2021 OREGON STANDARD SPECIFICATIONS FOR CONSTRUCTION.

2.2 ASPHALT MATERIALS

- ASPHALT BINDER: AASHTO M 320 OR AASHTO MP 1A, PG 64--22.
- TACK COAT: ASTM D 977 EMULSIFIED ASPHALT.

2.3 AUXILIARY MATERIALS

- RECYCLED MATERIALS FOR HOT-MIX ASPHALT MIXES: RECLAIMED ASPHALT PAVEMENT; RECLAIMED, UNBOUND-AGGREGATE BASE MATERIAL; AND RECYCLED TIRES, ASPHALT SHINGLES, OR GLASS FROM SOURCES AND GRADATIONS THAT HAVE PERFORMED SATISFACTORILY IN PREVIOUS INSTALLATIONS, EQUAL TO PERFORMANCE OF REQUIRED HOT-MIX ASPHALT PAVING PRODUCED FROM ALL NEW MATERIALS.
- HERBICIDE: COMMERCIAL CHEMICAL FOR WEED CONTROL, REGISTERED BY THE EPA. PROVIDE IN GRANULAR, LIQUID, OR WETTABLE POWDER FORM.
- PAVEMENT-MARKING PAINT: MPI #32 ALKYL TRAFFIC MARKING PAINT.
 - COLOR: WHITE, YELLOW, BLUE.
- PAVEMENT-MARKING PAINT: MPI #97 LATEX TRAFFIC MARKING PAINT.
 - COLOR: WHITE, YELLOW, BLUE.
- WHEEL STOPS: PRECAST, AIR-ENTRAINED CONCRETE, 2500-PSI (17.2 MPa) MINIMUM COMPRESSIVE STRENGTH, 6 INCHES HIGH BY 8 INCHES WIDE BY 72 INCHES LONG; PROVIDE CHAMFERED CORNERS, DRAINAGE SLOTS ON UNDERSIDE, AND HOLES FOR ANCHORING TO SUBSTRATE.
- DOWELS: GALVANIZED STEEL, 1/2 INCH DIAMETER, 10-INCH MINIMUM LENGTH.

2.4 MIXES

- RECYCLED CONTENT OF HOT-MIX ASPHALT: POSTCONSUMER RECYCLED CONTENT PLUS ONE-HALF OF PRECONSUMER RECYCLED CONTENT NOT LESS THAN 20 PERCENT OR MORE THAN 50 PERCENT BY WEIGHT.
- SURFACE COURSE LIMIT: RECYCLED CONTENT NO MORE THAN 30 PERCENT BY WEIGHT.
- HOT-MIX ASPHALT: DENSE-GRADED, HOT-LAID, HOT-MIX ASPHALT PLANT MIXES APPROVED BY AUTHORITIES HAVING JURISDICTION AND COMPLYING WITH THE FOLLOWING REQUIREMENTS:
 - PROVIDE MIXES WITH A HISTORY OF SATISFACTORY PERFORMANCE IN GEOGRAPHICAL AREA WHERE PROJECT IS LOCATED.
 - PROVIDE MIXES CONFORMING TO SECTION 00744 OF THE 2018 OREGON STANDARD SPECIFICATIONS FOR CONSTRUCTION.
 - BASE COURSE: LEVEL 2, 1/2 INCH DENSE, HMAc.
 - SURFACE COURSE: LEVEL 2, 1/2 INCH DENSE, HMAc.

PART 3 – EXECUTION

3.1 EXAMINATION

- PROOF-ROLL SUBGRADE BELOW PAVEMENTS WITH HEAVY PNEUMATIC-TIRED EQUIPMENT TO IDENTIFY SOFT POCKETS AND AREAS OF EXCESS YIELDING. DO NOT PROOF-ROLL WET OR SATURATED SUBGRADES.
- PROCEED WITH PAVING ONLY AFTER UNSATISFACTORY CONDITIONS HAVE BEEN CORRECTED.

3.2 PATCHING

- ASPHALT PAVEMENT: SAW OUT PERIMETER OF PATCH AND EXCAVATE EXISTING PAVEMENT SECTION TO SOUND BASE. EXCAVATE RECTANGULAR OR TRAPEZOIDAL PATCHES, EXTENDING 12 INCHES INTO PERIMETER OF ADJACENT SOUND PAVEMENT, UNLESS OTHERWISE INDICATED. CUT EXCAVATION FACES VERTICALLY. REMOVE EXCAVATED MATERIAL. RECOMPACT EXISTING UNBOUND-AGGREGATE BASE COURSE TO FORM NEW SUBGRADE.
- PORTLAND CEMENT CONCRETE PAVEMENT: BREAK CRACKED SLABS AND ROLL AS REQUIRED TO RESEAL CONCRETE PIECES FIRMLY.
 - REMOVE DISINTEGRATED OR BADLY CRACKED PAVEMENT. EXCAVATE RECTANGULAR OR TRAPEZOIDAL PATCHES, EXTENDING 12 INCHES INTO PERIMETER OF ADJACENT SOUND PAVEMENT, UNLESS OTHERWISE INDICATED. CUT EXCAVATION FACES VERTICALLY. RECOMPACT EXISTING UNBOUND-AGGREGATE BASE COURSE TO FORM NEW SUBGRADE.
- TACK COAT: APPLY TACK COAT UNIFORMLY TO VERTICAL ASPHALT SURFACES. APPLY AT A RATE OF 0.05 TO 0.15 GAL./SQ. YD.
 - ALLOW TACK COAT TO CURE UNDISTURBED BEFORE APPLYING HOT-MIX ASPHALT PAVING.
 - AVOID SMEARING OR STAINING ADJOINING SURFACES, APPURTENANCES, AND SURROUNDINGS. REMOVE SPILLAGES AND CLEAN AFFECTED SURFACES.
- PLACING PATCH MATERIAL: FILL EXCAVATED PAVEMENT AREAS WITH HOT-MIX ASPHALT BASE MIX FOR FULL THICKNESS OF PATCH AND, WHILE STILL HOT, COMPACT FLUSH WITH ADJACENT SURFACE.
- ASPHALT AND SAND SEAL EDGES WHERE NEW ASPHALT CONCRETE MEETS EXISTING PAVEMENT.

3.3 SURFACE PREPARATION

- GENERAL: IMMEDIATELY BEFORE PLACING ASPHALT MATERIALS, REMOVE LOOSE AND DELETERIOUS MATERIAL FROM SUBSTRATE SURFACES. ENSURE THAT PREPARED SUBGRADE IS READY TO RECEIVE PAVING.
- PROOF-ROLL SUBGRADE BELOW PAVEMENTS WITH HEAVY PNEUMATIC-TIRED EQUIPMENT TO IDENTIFY SOFT POCKETS AND AREAS OF EXCESS YIELDING. DO NOT PROOF-ROLL WET OR SATURATED SUBGRADES.
- HERBICIDE TREATMENT: APPLY HERBICIDE ACCORDING TO MANUFACTURER'S RECOMMENDED RATES AND WRITTEN APPLICATION INSTRUCTIONS. APPLY TO DRY, PREPARED SUBGRADE OR SURFACE OF COMPACTED-AGGREGATE BASE BEFORE APPLYING PAVING MATERIALS.

ASPHALT PAVING

- TACK COAT: APPLY UNIFORMLY TO SURFACES OF EXISTING PAVEMENT AT A RATE OF 0.05 TO 0.15 GAL./SQ. YD.
 - ALLOW TACK COAT TO CURE UNDISTURBED BEFORE APPLYING HOT-MIX ASPHALT PAVING.
 - AVOID SMEARING OR STAINING ADJOINING SURFACES, APPURTENANCES, AND SURROUNDINGS. REMOVE SPILLAGES AND CLEAN AFFECTED SURFACES.

3.4 PLACING HOT-MIX ASPHALT

- MACHINE PLACE HOT-MIX ASPHALT ON PREPARED SURFACE. SPREAD UNIFORMLY, AND STRIKE OFF. PLACE ASPHALT MIX BY HAND IN AREAS INACCESSIBLE TO EQUIPMENT IN A MANNER THAT PREVENTS SEGREGATION OF MIX. PLACE EACH COURSE TO REQUIRED GRADE, CROSS SECTION, AND THICKNESS WHEN COMPACTED.
 - SPREAD MIX AT A MINIMUM TEMPERATURE OF 250 DEG F.
 - REGULATE PAVEMENT SPEED TO OBTAIN SMOOTH, CONTINUOUS SURFACE FREE OF PULLS AND TEARS IN ASPHALT-PAVING MAT.
- PLACE PAVING IN CONSECUTIVE STRIPS NOT LESS THAN 10 FEET WIDE UNLESS INFILL EDGE STRIPS OF A LESSER WIDTH ARE REQUIRED.
- PROMPTLY CORRECT SURFACE IRREGULARITIES IN PAVING COURSE BEHIND PAVER. USE SUITABLE HAND TOOLS TO REMOVE EXCESS MATERIAL FORMING HIGH SPOTS. FILL DEPRESSIONS WITH HOT-MIX ASPHALT TO PREVENT SEGREGATION OF MIX; USE SUITABLE HAND TOOLS TO SMOOTH SURFACE.
- PROVIDE ADEQUATE LIGHTING TO ILLUMINATE THE PAVER AND THE ROADWAY IN FRONT OF AND BEHIND THE PAVER DURING THE PERIOD FROM 30 MINUTES AFTER SUNSET TO 30 MINUTES BEFORE SUNRISE, OR AS DEEMED NECESSARY BY THE ENGINEER. PROVIDE A MINIMUM LIGHT LEVEL OF 10 FOOT-CANDELES AS MEASURED ON THE PAVED SURFACE AT A DISTANCE OF 16 FEET FROM THE FRONT AND BACK EDGE OF THE PAVER. SHIELD LIGHTING FROM ADJACENT TRAFFIC AND ROADWAYS AS NECESSARY.

3.5 JOINTS

- CONSTRUCT JOINTS TO ENSURE A CONTINUOUS BOND BETWEEN ADJOINING PAVING SECTIONS. CONSTRUCT JOINTS FREE OF DEPRESSIONS, WITH SAME TEXTURE AND SMOOTHNESS AS OTHER SECTIONS OF HOT-MIX ASPHALT COURSE.
 - CLEAN CONTACT SURFACES AND APPLY TACK COAT TO JOINTS.
 - OFFSET LONGITUDINAL JOINTS, IN SUCCESSIVE COURSES, A MINIMUM OF 6 INCHES.
 - OFFSET TRANSVERSE JOINTS, IN SUCCESSIVE COURSES, A MINIMUM OF 24 INCHES.
- CONSTRUCT TRANSVERSE JOINTS AT EACH POINT WHERE PAVER ENDS A DAY'S WORK AND RESUMES WORK AT A SUBSEQUENT TIME. CONSTRUCT THESE JOINTS USING EITHER "BULHEAD" OR "PAIRED" METHOD ACCORDING TO AI MS-22, FOR BOTH "ENDING A LANE" AND "RESUMPTION OF PAVING OPERATIONS."

3.6 COMPACTION

- GENERAL: BEGIN COMPACTION AS SOON AS PLACED HOT-MIX PAVING WILL BEAR ROLLER WEIGHT WITHOUT EXCESSIVE DISPLACEMENT. COMPACT HOT-MIX PAVING WITH HOT, HAND TAMPERS OR WITH VIBRATORY-PLATE COMPACTORS IN AREAS INACCESSIBLE TO ROLLERS.
 - COMPLETE COMPACTION BEFORE MIX TEMPERATURE COOLS TO 185 DEG F.
- BREAKDOWN ROLLING: COMPLETE BREAKDOWN OR INITIAL ROLLING IMMEDIATELY AFTER ROLLING JOINTS AND OUTSIDE EDGE. EXAMINE SURFACE IMMEDIATELY AFTER BREAKDOWN ROLLING FOR INDICATED CROWN, GRADE, AND SMOOTHNESS. CORRECT LAYDOWN AND ROLLING OPERATIONS TO COMPLY WITH REQUIREMENTS.
- INTERMEDIATE ROLLING: BEGIN INTERMEDIATE ROLLING IMMEDIATELY AFTER BREAKDOWN ROLLING WHILE HOT-MIX ASPHALT IS STILL HOT ENOUGH TO ACHIEVE SPECIFIED DENSITY. CONTINUE ROLLING UNTIL HOT-MIX ASPHALT COURSE HAS BEEN UNIFORMLY COMPACTED TO THE FOLLOWING DENSITY:
 - AVERAGE DENSITY: 92 PERCENT OF REFERENCE MAXIMUM THEORETICAL DENSITY ACCORDING TO ASTM D 2041, BUT NOT LESS THAN 90 PERCENT OR GREATER THAN 96 PERCENT.
- FINISH ROLLING: FINISH ROLL PAVED SURFACES TO REMOVE ROLLER MARKS WHILE HOT-MIX ASPHALT IS STILL WARM.
- EDGE SHAPING: WHILE SURFACE IS BEING COMPACTED AND FINISHED, TRIM EDGES OF PAVEMENT TO PROPER ALIGNMENT. BEVEL EDGES WHILE ASPHALT IS STILL HOT; COMPACT THOROUGHLY.
- PROTECTION: AFTER FINAL ROLLING, DO NOT PERMIT VEHICULAR TRAFFIC ON PAVEMENT UNTIL IT HAS COOLED AND HARDENED.
- ERECT BARRICADES TO PROTECT PAVING FROM TRAFFIC UNTIL MIXTURE HAS COOLED ENOUGH NOT TO BECOME MARKED.
- PROVIDE ADEQUATE LIGHTING TO ILLUMINATE EACH ROLLER AND THE ROADWAY IN FRONT OF AND BEHIND THE ROLLER DURING THE PERIOD FROM 30 MINUTES AFTER SUNSET TO 30 MINUTES BEFORE SUNRISE, OR AS DEEMED NECESSARY BY THE ENGINEER. PROVIDE A MINIMUM LIGHT LEVEL OF 10 FOOT-CANDELES AS MEASURED ON THE PAVED SURFACE AT A DISTANCE OF 80 FEET FROM THE FRONT AND BACK EDGE OF EACH ROLLER. SHIELD LIGHTING FROM ADJACENT TRAFFIC AND ROADWAYS AS NECESSARY.
- COMPACTION TO A SPECIFIED DENSITY WILL NOT BE REQUIRED FOR THIN PAVEMENTS SUCH AS LEVELING, PATCHES, OR WHERE THE NOMINAL COMPACTED THICKNESS OF A COURSE OF ASPHALT CONCRETE PAVEMENT WILL BE LESS THAN 2 INCHES.

3.7 INSTALLATION TOLERANCES

- PAVEMENT THICKNESS: COMPACT EACH COURSE TO PRODUCE THE THICKNESS INDICATED WITHIN THE FOLLOWING TOLERANCES:
 - BASE COURSE: PLUS OR MINUS 1/2 INCH.
 - SURFACE COURSE: PLUS 1/4 INCH, NO MINUS.
- PAVEMENT SURFACE SMOOTHNESS: COMPACT EACH COURSE TO PRODUCE A SURFACE SMOOTHNESS WITHIN THE FOLLOWING TOLERANCES AS DETERMINED BY USING A 10-FOOT STRAIGHTEDGE APPLIED TRANSVERSELY OR LONGITUDINALLY TO PAVED AREAS:
 - BASE COURSE: 1/4 INCH.
 - SURFACE COURSE: 1/8 INCH.
 - CROWNED SURFACES: TEST WITH CROWNED TEMPLATE CENTERED AND AT RIGHT ANGLE TO CROWN. MAXIMUM ALLOWABLE VARIANCE FROM TEMPLATE IS 1/4 INCH.
 - DIFFERENCE BETWEEN ADJACENT PANELS: 1/8 INCH.

3.8 PAVEMENT MARKING

- DO NOT APPLY PAVEMENT-MARKING PAINT OR THERMOPLASTIC MATERIAL UNTIL LAYOUT, COLORS AND PLACEMENT HAVE BEEN VERIFIED WITH ARCHITECT.
- ALLOW PAVING TO AGE FOR 30 DAYS BEFORE STARTING PAVEMENT MARKING.
- SWEEP AND CLEAN SURFACE TO ELIMINATE LOOSE MATERIAL AND DUST.
- APPLY PAINT WITH MECHANICAL EQUIPMENT TO PRODUCE PAVEMENT MARKINGS, OF DIMENSIONS INDICATED, WITH UNIFORM, STRAIGHT EDGES. APPLY AT MANUFACTURER'S RECOMMENDED RATES TO PROVIDE A MINIMUM WET FILM THICKNESS OF 15 MILS.
 - BROADCAST GLASS BEADS UNIFORMLY INTO WET PAVEMENT MARKINGS AT A RATE OF 6 LB/GAL.

3.9 WHEEL STOPS

- INSTALL WHEEL STOPS WITH DOWELS.

3.10 CORRECTION OF DEFECTS

- CORRECT ALL DEFECTS IN MATERIALS AND WORK AT NO ADDITIONAL COST TO THE OWNER, AS FOLLOWS:
 - FOULED SURFACES: IMMEDIATELY REPAIR, CLEAN, AND RE-TACK FOULED SURFACES THAT WOULD PREVENT FULL BOND BETWEEN SUCCESSIVE LIFTS OF MIXTURE.
 - BOILS, SLICKS, AND OVERSIZED MATERIAL: IMMEDIATELY REMOVE AND REPLACE BOILS, SLICKS, AND OVERSIZED MATERIALS WITH FRESH MIXTURE.
 - SEGREGATION: TAKE IMMEDIATE CORRECTIVE MEASURES WHEN SEGREGATION OR NON-UNIFORM SURFACE TEXTURE IS OCCURRING IN THE FINISHED MAT. IF SEGREGATION CONTINUES TO OCCUR, STOP PRODUCTION UNTIL A PLAN FOR PROVIDING UNIFORM SURFACE TEXTURE IS APPROVED BY THE PORT.
 - ROLLER DAMAGE TO THE SURFACE: IMMEDIATELY CORRECT SURFACE DAMAGE FROM ROLLERS WITH ADDITIONAL FRESH MIXTURE OR BY OTHER MEANS APPROVED BY THE OWNER.
 - LONGITUDINAL JOINTS: TAKE IMMEDIATE CORRECTIVE MEASURES WHEN OPEN LONGITUDINAL JOINTS ARE BEING CONSTRUCTED OR WHEN THE ELEVATION OF THE LONGITUDINAL JOINT DOES NOT MATCH. IF PROBLEMS WITH THE LONGITUDINAL JOINT CONTINUE TO OCCUR, STOP PRODUCTION UNTIL A PLAN FOR PROVIDING TIGHT, EQUAL ELEVATION LONGITUDINAL JOINTS IS APPROVED BY THE OWNER.
 - CORRECTIVE MEASURES: TAKE IMMEDIATE CORRECTIVE MEASURES WHEN THE SPECIFIED COMPACTION DENSITY IS NOT BEING ACHIEVED.
 - OTHER DEFECTS: REMOVE AND REPLACE ANY HMAc THAT:
 - IS LOOSE, BROKEN, OR MIXED WITH DIRT.
 - VISUALLY SHOWS TOO MUCH OR TOO LITTLE ASPHALT.
 - IS DEFECTIVE IN ANY WAY.

3.11 FIELD QUALITY CONTROL

- TESTING AGENCY: CONTRACTOR WILL ENGAGE A QUALIFIED TESTING AGENCY TO PERFORM TESTS AND INSPECTIONS.
- VERIFY DENSITY BY RANDOM TESTING OF THE COMPACTED SURFACE WITH CALIBRATED NUCLEAR GAUGES. DETERMINE THE DENSITY BY AVERAGING QC TESTS PERFORMED BY A CERTIFIED D

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PORTLAND CEMENT CONCRETE CURBS, GUTTERS, SIDEWALKS, AND PAVING

SECTION 32 16 00 -- PORTLAND CEMENT CONCRETE CURBS, GUTTERS, SIDEWALKS, AND PAVING

PART 1 -- GENERAL

1.1 SUMMARY

A. SECTION INCLUDES

1. CONCRETE PAVING, CURBS AND GUTTERS.
2. SIDEWALKS.

1.2 SUBMITTALS

A. PRODUCT DATA: FOR EACH TYPE OF PRODUCT INDICATED.

B. DESIGN MIXTURES: FOR EACH CONCRETE PAVING MIXTURE. INCLUDE ALTERNATE DESIGN MIXTURES WHEN CHARACTERISTICS OF MATERIALS, PROJECT CONDITIONS, WEATHER, TEST RESULTS, OR OTHER CIRCUMSTANCES WARRANT ADJUSTMENTS.

C. MATERIAL CERTIFICATES: SIGNED BY MANUFACTURERS CERTIFYING THAT EACH OF THE FOLLOWING MATERIALS COMPLIES WITH REQUIREMENTS:

1. CEMENTITIOUS MATERIALS.
2. ADMIXTURES
3. CURING COMPOUNDS
4. APPLIED FINISH MATERIALS.
5. BONDING AGENT OR EPOXY ADHESIVE.
6. JOINT FILLERS.

D. MINUTES OF PREINSTALLATION CONFERENCE.

1.3 QUALITY ASSURANCE

A. READY-MIX-CONCRETE MANUFACTURER QUALIFICATIONS: A FIRM EXPERIENCED IN MANUFACTURING READY-MIXED CONCRETE PRODUCTS AND THAT COMPLIES WITH ASTM C 94/C 94M REQUIREMENTS FOR PRODUCTION FACILITIES AND EQUIPMENT.

1. MANUFACTURER CERTIFIED ACCORDING TO NRMCA'S "CERTIFICATION OF READY MIXED CONCRETE PRODUCTION FACILITIES."

B. ACI PUBLICATIONS: COMPLY WITH ACI 301 UNLESS OTHERWISE INDICATED.

1.4 PROJECT CONDITIONS

A. TRAFFIC CONTROL: MAINTAIN ACCESS FOR VEHICULAR AND PEDESTRIAN TRAFFIC AS REQUIRED FOR OTHER CONSTRUCTION ACTIVITIES.

PART 2 -- PRODUCTS

2.1 FORMS

A. FORM MATERIALS: PLYWOOD, METAL, METAL-FRAMED PLYWOOD, OR OTHER APPROVED PANEL-TYPE MATERIALS TO PROVIDE FULL-DEPTH, CONTINUOUS, STRAIGHT, SMOOTH EXPOSED SURFACES.

1. USE FLEXIBLE OR CURVED FORMS FOR CURVES WITH A RADIUS 100 FEET OR LESS.

B. FORM-RELEASE AGENT: COMMERCIALY FORMULATED FORM-RELEASE AGENT THAT WILL NOT BOND WITH, STAIN, OR ADVERSELY AFFECT CONCRETE SURFACES AND WILL NOT IMPAIR SUBSEQUENT TREATMENTS OF CONCRETE SURFACES.

2.2 CONCRETE MATERIALS

A. CEMENTITIOUS MATERIAL: USE THE FOLLOWING CEMENTITIOUS MATERIALS, OF SAME TYPE, BRAND, AND SOURCE THROUGHOUT PROJECT:

1. PORTLAND CEMENT: ASTM C 150, GRAY PORTLAND CEMENT TYPE I
 - a. FLY ASH: ASTM C 618, CLASS C.

B. NORMAL-WEIGHT AGGREGATES: ASTM C 33, CLASS 4M, UNIFORMLY GRADED. PROVIDE AGGREGATES FROM A SINGLE SOURCE.

1. MAXIMUM COARSE-AGGREGATE SIZE: 1 INCH NOMINAL.
2. FINE AGGREGATE: FREE OF MATERIALS WITH DELETERIOUS REACTIVITY TO ALKALI IN CEMENT.

C. WATER: POTABLE AND COMPLYING WITH ASTM C 94/C 94M.

D. AIR-ENTRAINING ADMIXTURE: ASTM C 260.

E. CHEMICAL ADMIXTURES: ADMIXTURES CERTIFIED BY MANUFACTURER TO BE COMPATIBLE WITH OTHER ADMIXTURES AND TO CONTAIN NOT MORE THAN 0.1 PERCENT WATER-SOLUBLE CHLORIDE IONS BY MASS OF CEMENTITIOUS MATERIAL.

1. WATER-REDUCING ADMIXTURE: ASTM C 494/C 494M, TYPE A.
2. WATER-REDUCING AND RETARDING ADMIXTURE: ASTM C 494/C 494M, TYPE D.
3. HIGH-RANGE, WATER-REDUCING ADMIXTURE: ASTM C 494/C 494M, TYPE F.

2.3 CURING MATERIALS

A. ABSORPTIVE COVER: AASHTO M 182, CLASS 3, BURLAP CLOTH MADE FROM JUTE OR KENAF, WEIGHING APPROXIMATELY 9 OZ./SQ. YD. DRY.

B. MOISTURE-RETAINING COVER: ASTM C 171, POLYETHYLENE FILM OR WHITE BURLAP-POLYETHYLENE SHEET.

C. WATER: POTABLE.

D. EVAPORATION RETARDER: WATERBORNE, MONOMOLECULAR, FILM FORMING, MANUFACTURED FOR APPLICATION TO FRESH CONCRETE.

E. CLEAR, WATERBORNE, MEMBRANE-FORMING CURING COMPOUND: ASTM C 309, TYPE 1, CLASS B.

F. WHITE, WATERBORNE, MEMBRANE-FORMING CURING COMPOUND: ASTM C 309, TYPE 2, CLASS B.

2.4 RELATED MATERIALS

A. JOINT FILLERS: ASTM D 1751, ASPHALT-SATURATED CELLULOSIC FIBER IN PREFORMED STRIPS.

B. EPOXY BONDING ADHESIVE: ASTM C 881, TWO-COMPONENT EPOXY RESIN, CAPABLE OF HUMID CURING AND BONDING TO DAMP SURFACES, OF CLASS SUITABLE FOR APPLICATION TEMPERATURE AND OF GRADE TO REQUIREMENTS.

2.5 CONCRETE MIXTURES

A. PREPARE DESIGN MIXTURES, PROPORTIONED ACCORDING TO ACI 301, WITH THE FOLLOWING PROPERTIES:

1. COMPRESSIVE STRENGTH (28 DAYS): 3000 PSI.
2. MAXIMUM WATER-CEMENTITIOUS MATERIALS RATIO AT POINT OF PLACEMENT: 0.50.
3. SLUMP LIMIT: 4 INCHES, PLUS OR MINUS 1 INCH.
4. AIR CONTENT: 4-1/2 PERCENT PLUS OR MINUS 1.5 PERCENT FOR 1-INCH (25-MM) NOMINAL MAXIMUM AGGREGATE SIZE.

B. CHEMICAL ADMIXTURES: USE ADMIXTURES ACCORDING TO MANUFACTURER'S WRITTEN INSTRUCTIONS.

2.6 CONCRETE MIXING

A. READY-MIXED CONCRETE: MEASURE, BATCH, AND MIX CONCRETE MATERIALS AND CONCRETE ACCORDING TO ASTM C 94/C 94M. FURNISH BATCH CERTIFICATES FOR EACH BATCH DISCHARGED AND USED IN THE WORK.

1. WHEN TEMPERATURE IS BETWEEN 85 DEG F AND 90 DEG F, REDUCE MIXING AND DELIVERY TIME FROM 1-1/2 HOURS TO 75 MINUTES; WHEN AIR TEMPERATURE IS ABOVE 90 DEG F, REDUCE MIXING AND DELIVERY TIME TO 60 MINUTES.

PART 3 -- EXECUTION

3.1 EXAMINATION AND PREPARATION

A. EXAMINE EXPOSED SUBGRADES AND SUBBASE SURFACES FOR COMPLIANCE WITH REQUIREMENTS FOR DIMENSIONAL, GRADING AND ELEVATION TOLERANCES. SEE SECTION 31 20 00 "EARTH MOVING."

B. REMOVE LOOSE MATERIAL FROM COMPACTED SUBBASE SURFACE IMMEDIATELY BEFORE PLACING CONCRETE.

C. PROCEED WITH CONCRETE OPERATIONS ONLY AFTER NONCONFORMING CONDITIONS HAVE BEEN CORRECTED AND SUBGRADE IS READY TO RECEIVE PAVEMENT.

3.2 EDGE FORMS AND SCREED CONSTRUCTION

A. SET, BRACE, AND SECURE EDGE FORMS TO REQUIRED LINES, GRADES, AND ELEVATIONS. INSTALL FORMS TO ALLOW CONTINUOUS PROGRESS OF WORK AND SO FORMS CAN REMAIN IN PLACE AT LEAST 24 HOURS AFTER CONCRETE PLACEMENT.

B. CLEAN FORMS AFTER EACH USE AND COAT WITH FORM-RELEASE AGENT TO ENSURE SEPARATION FROM CONCRETE WITHOUT DAMAGE.

3.3 JOINTS

A. GENERAL: FORM CONSTRUCTION, ISOLATION, AND CONTRACTION JOINTS AND TOOL EDGES TRUE TO LINE, WITH FACES PERPENDICULAR TO SURFACE PLANE OF CONCRETE. CONSTRUCT TRANSVERSE JOINTS AT RIGHT ANGLES TO CENTERLINE UNLESS OTHERWISE INDICATED.

1. WHEN JOINING EXISTING STRUCTURES, PLACE TRANSVERSE JOINTS TO ALIGN WITH PREVIOUSLY PLACED

JOINTS, UNLESS OTHERWISE INDICATED.

B. CONSTRUCTION JOINTS: SET CONSTRUCTION JOINTS AT SIDE AND END TERMINATIONS OF THE CONCRETE STRUCTURE AND AT LOCATIONS WHERE CONCRETE OPERATIONS ARE STOPPED FOR MORE THAN ONE-HALF HOUR UNLESS THE STRUCTURE TERMINATES AT ISOLATION JOINTS.

1. BUTT JOINTS: USE EPOXY BONDING ADHESIVE AT JOINT LOCATIONS WHERE FRESH CONCRETE IS PLACED AGAINST HARDENED OR PARTIALLY HARDENED CONCRETE SURFACES.

C. EXPANSION JOINTS:

1. CONSTRUCT EXPANSION JOINTS OF THE PREFORMED FILLER TYPE IN CONCRETE STRUCTURES AS SHOWN AND THE FOLLOWING:

- a. NOT LESS THAN 1/2 INCH WIDE, EXCEPT WHERE ABUTTING OR UNDERLYING CONCRETE JOINTS ARE LARGER, THEN THE WIDTH SHALL MATCH THOSE JOINTS.
- b. AT RIGHT ANGLES TO THE STRUCTURE ALIGNMENT AND NORMAL TO THE STRUCTURE SURFACE.
- c. WHICH COMPLETELY SEPARATE THE CONCRETE SEGMENTS.
- d. PLACED FLUSH OR NO MORE THAN 1/8 INCH BELOW THE CONCRETE SURFACE.

2. CURBS: PROVIDE EXPANSION JOINTS:

- a. OPPOSITE ABUTTING EXPANSION JOINTS IN ABUTTING CONCRETE.
- b. OVER EXISTING EXPANSION JOINTS IN CONCRETE UNDERLYING THE NEW CONCRETE STRUCTURE.
- c. AT EACH POINT OF TANGENCY IN THE STRUCTURE ALIGNMENT.
- d. NOT OVER 200 FOOT SPACING.

3. WALKS, MONOLITHIC CURBS AND SIDEWALKS, AND SURFACING. PROVIDE EXPANSION JOINTS:

- a. TRANSVERSELY IN WALKS OPPOSITE EXPANSION JOINTS IN ADJOINING CURBS AND ELSEWHERE SO THE DISTANCE BETWEEN JOINTS DOES NOT EXCEED 45 FEET.
- b. TRANSVERSELY IN WALKS AT A DISTANCE OF 16 FEET TO 8 FEET FROM ENDS OF WALKS WHICH ABUT CURBS.
- c. AROUND POLES, POSTS, BOXES, AND OTHER FIXTURES WHICH PROTRUDE THROUGH OR AGAINST THE STRUCTURES.

D. CONTRACTION JOINTS. CONSTRUCT TRANSVERSE CONTRACTION JOINTS OF THE WEAKENED PLANE OR DUMMY TYPE IN THE EXPOSED SURFACES OF THE CONCRETE STRUCTURES AS SHOWN AND THE FOLLOWING:

1. LOCATIONS. LOCATE CONTRACTION JOINTS:

- a. OVER CONTRACTION JOINTS IN CONCRETE UNDERLYING THE NEW CONCRETE STRUCTURE.
- b. OPPOSITE CONTRACTION JOINTS IN ABUTTING CONCRETE.
- c. AT LOCATIONS TO CONFINE JOINT SPACING TO A MAXIMUM OF 15 FEET.

2. METHODS. CONSTRUCT CONTRACTION JOINTS BY:

- a. INSERTING AND REMOVING PLATES, OR OTHER DEVICES.
- b. INSERTING AND LEAVING IN PLACE PREFORMED EXPANSION JOINT FILLER EVEN AND FLUSH WITH THE CONCRETE SURFACE.
- c. SAWING AS SOON AS PRACTICAL AFTER CONCRETE PLACEMENT BUT BEFORE ANY UNCONTROLLED CRACKING OCCURS.
- d. TOOLING.
- e. OTHER APPROVED METHODS.

3. REQUIREMENTS. CONTRACTION JOINTS SHALL:

- a. BE NOT LESS THAN 1/8 INCH OR MORE THAN 1/4 INCH WIDE.
- b. BE A DEPTH OF ONE-THIRD THE THICKNESS OF THE CONCRETE.
- c. HAVE CLEAN, UNFILLED GROOVES (IF PREFORMED EXPANSION JOINT FILLER IS NOT USED).

3.4 CONCRETE PLACEMENT

A. INSPECTION: BEFORE PLACING CONCRETE, INSPECT AND COMPLETE FORMWORK INSTALLATION AND ITEMS TO BE EMBEDDED OR CAST IN. NOTIFY OTHER TRADES TO PERMIT INSTALLATION OF THEIR WORK.

B. REMOVE SNOW, ICE, OR FROST FROM SUBBASE SURFACE AND REINFORCEMENT BEFORE PLACING CONCRETE. DO NOT PLACE CONCRETE ON FROZEN SURFACES.

C. MOISTEN SUBBASE TO PROVIDE A UNIFORM DAMPENED CONDITION AT TIME CONCRETE IS PLACED. DO NOT PLACE CONCRETE AROUND MANHOLES OR OTHER STRUCTURES UNTIL THEY ARE AT REQUIRED FINISH ELEVATION AND ALIGNMENT.

D. COMPLY WITH ACI 301 REQUIREMENTS FOR MEASURING, MIXING, TRANSPORTING, PLACING, AND CONSOLIDATING CONCRETE.

E. DO NOT ADD WATER TO CONCRETE DURING DELIVERY OR AT PROJECT SITE.

F. DO NOT ADD WATER TO FRESH CONCRETE AFTER TESTING.

G. CONSOLIDATE CONCRETE ACCORDING TO ACI 301 BY MECHANICAL VIBRATING EQUIPMENT SUPPLEMENTED BY HAND SPADING, RODDING, OR TAMPING.

1. CONSOLIDATE CONCRETE ALONG FACE OF FORMS AND ADJACENT TO TRANSVERSE JOINTS WITH AN INTERNAL VIBRATOR. KEEP VIBRATOR AWAY FROM JOINT ASSEMBLIES, REINFORCEMENT, OR SIDE FORMS. USE ONLY SQUARE-FACED SHOVELS FOR HAND SPREADING AND CONSOLIDATION. CONSOLIDATE WITH CARE TO PREVENT DISLOCATING JOINT DEVICES.

H. DEPOSIT AND SPREAD CONCRETE IN A CONTINUOUS OPERATION BETWEEN TRANSVERSE JOINTS. DO NOT PUSH OR DRAG CONCRETE INTO PLACE OR USE VIBRATORS TO MOVE CONCRETE INTO PLACE.

I. SCREED PAVING SURFACE WITH A STRAIGHTEDGE AND STRIKE OFF.

J. COMMENCE INITIAL FLOATING USING BULL FLOATS OR DARBIES TO IMPART AN OPEN-TEXTURED AND UNIFORM SURFACE PLANE BEFORE EXCESS MOISTURE OR BLEED WATER APPEARS ON THE SURFACE. DO NOT FURTHER DISTURB CONCRETE SURFACES BEFORE BEGINNING FINISHING OPERATIONS OR SPREADING SURFACE TREATMENTS.

K. CURBS AND GUTTERS: WHEN AUTOMATIC MACHINE PLACEMENT IS USED FOR CURB AND GUTTER PLACEMENT, SUBMIT REVISED MIX DESIGN AND LABORATORY TEST RESULTS THAT MEET OR EXCEED REQUIREMENTS. PROVIDE CURBS AND GUTTERS TO REQUIRED CROSS-SECTION, LINES, GRADES, FINISH, AND JOINTING AS SPECIFIED FOR FORMED CONCRETE. IF RESULTS ARE NOT APPROVED, REMOVE AND REPLACE WITH FORMED CONCRETE.

L. REMOVE FORMS AFTER THE CONCRETE HAS TAKEN ITS INITIAL SET AND WHILE THE CONCRETE IS STILL GREEN. REPAIR MINOR DEFECTS WITH MORTAR CONTAINING ONE PART PORTLAND CEMENT AND TWO PARTS SAND. PLASTERING WILL NOT BE PERMITTED ON THE FACES AND EXPOSED SURFACES. HONEYCOMBED AND OTHER STRUCTURALLY DEFECTIVE CONCRETE SHALL BE REMOVED AND REPLACED AT NO ADDED COST TO THE OWNER. WHILE THE CONCRETE IS STILL GREEN, THE EXPOSED SURFACES SHALL BE FINISHED BY RUBBING DOWN HIGH SPOTS, TO FORM MARKS, BY RUBBING THE MOISTENED SURFACES WITH A SUITABLE DEVICE TO PROVIDE A UNIFORM TEXTURE AND SMOOTH SURFACE, OR BY APPLYING AND RUBBING A THIN CEMENT GROUT TO PRODUCE A UNIFORM COLOR.

M. COLD-WEATHER PLACEMENT: COMPLY WITH ACI 306.1 AND AS FOLLOWS. PROTECT CONCRETE WORK FROM PHYSICAL DAMAGE OR REDUCED STRENGTH THAT COULD BE CAUSED BY FROST, FREEZING ACTIONS, OR LOW TEMPERATURES.

1. WHEN AIR TEMPERATURE HAS FALLEN TO OR IS EXPECTED TO FALL BELOW 40 DEG F, UNIFORMLY HEAT WATER AND AGGREGATES BEFORE MIXING TO OBTAIN A CONCRETE MIXTURE TEMPERATURE OF NOT LESS THAN 50 DEG F AND NOT MORE THAN 80 DEG F AT POINT OF PLACEMENT.
2. DO NOT USE FROZEN MATERIALS OR MATERIALS CONTAINING ICE OR SNOW.
3. DO NOT USE CALCIUM CHLORIDE, SALT, OR OTHER MATERIALS CONTAINING ANTIFREEZE AGENTS OR CHEMICAL ACCELERATORS UNLESS OTHERWISE SPECIFIED AND APPROVED IN MIX DESIGNS.

N. HOT-WEATHER PLACEMENT: COMPLY WITH ACI 301 AND AS FOLLOWS WHEN HOT-WEATHER CONDITIONS EXIST:

1. COOL INGREDIENTS BEFORE MIXING TO MAINTAIN CONCRETE TEMPERATURE BELOW 90 DEG F AT TIME OF PLACEMENT. CHILLED MIXING WATER OR CHIPPED ICE MAY BE USED TO CONTROL TEMPERATURE. PROVIDED WATER EQUIVALENT OF ICE IS CALCULATED TO TOTAL AMOUNT OF MIXING WATER. USING LIQUID NITROGEN TO COOL CONCRETE IS CONTRACTOR'S OPTION.
2. COVER STEEL REINFORCEMENT WITH WATER-SOAKED BURLAP SO STEEL TEMPERATURE WILL NOT EXCEED AMBIENT AIR TEMPERATURE IMMEDIATELY BEFORE EMBEDDING IN CONCRETE.
3. FOG-SPRAY FORMS, STEEL REINFORCEMENT, AND SUBGRADE JUST BEFORE PLACING CONCRETE. KEEP SUBGRADE MOISTURE UNIFORM WITHOUT STANDING WATER, SOFT SPOTS, OR DRY AREAS.

3.5 FLOAT FINISHING

A. GENERAL: DO NOT ADD WATER TO CONCRETE SURFACES DURING FINISHING OPERATIONS.

B. FLOAT FINISH: BEGIN THE SECOND FLOATING OPERATION WHEN BLEED-WATER SHEEN HAS DISAPPEARED AND CONCRETE SURFACE HAS STIFFENED SUFFICIENTLY TO PERMIT OPERATIONS. FLOAT SURFACE WITH POWER-DRIVEN FLOATS OR BY HAND FLOATING IF AREA IS SMALL OR INACCESSIBLE TO POWER UNITS. FINISH SURFACES TO TRUE PLANES. CUT DOWN HIGH SPOTS AND FILL LOW SPOTS. REFLOAT SURFACE IMMEDIATELY TO UNIFORM GRANULAR TEXTURE.

1. MEDIUM-TO-FINE-TEXTURED BROOM FINISH: DRAW A SOFT-BRISTLE BROOM ACROSS FLOAT-FINISHED CONCRETE SURFACE PERPENDICULAR TO LINE OF TRAFFIC TO PROVIDE A UNIFORM, FINE-LINE TEXTURE.

2. MEDIUM-TO-COARSE-TEXTURED BROOM FINISH: PROVIDE A COARSE FINISH BY STRIATING FLOAT-FINISHED CONCRETE SURFACE 1/16 TO 1/8 INCH DEEP WITH A STIFF-BRISTLED BROOM, PERPENDICULAR TO LINE OF TRAFFIC.

C. EDGING: TOOL EDGES OF PAVEMENT, GUTTERS, CURBS, AND JOINTS IN CONCRETE AFTER INITIAL FLOATING WITH AN EDGING TOOL TO A 1/4 INCH (6MM) RADIUS. REPEAT TOOLING OF EDGES AFTER APPLYING SURFACE FINISHED. ELIMINATE TOOL MARKS ON CONCRETE SURFACES.

3.6 CONCRETE PROTECTION AND CURING

A. GENERAL: PROTECT FRESHLY PLACED CONCRETE FROM PREMATURE DRYING AND EXCESSIVE COLD OR HOT TEMPERATURES.

B. COMPLY WITH ACI 306.1 FOR COLD-WEATHER PROTECTION.

C. EVAPORATION RETARDER: APPLY EVAPORATION RETARDER TO CONCRETE SURFACES IF HOT, DRY, OR

WINDY CONDITIONS CAUSE MOISTURE LOSS APPROACHING 0.2 LB/SQ. FT. X H BEFORE AND DURING FINISHING OPERATIONS. APPLY ACCORDING TO MANUFACTURER'S WRITTEN INSTRUCTIONS AFTER PLACING, SCREEDING, AND BULL FLOATING OR DARBING CONCRETE BUT BEFORE FLOAT FINISHING.

D. BEGIN CURING AFTER FINISHING CONCRETE BUT NOT BEFORE FREE WATER HAS DISAPPEARED FROM CONCRETE SURFACE.

E. CURING METHODS: CURE CONCRETE BY MOISTURE CURING, MOISTURE-RETAINING-COVER CURING, CURING COMPOUND, OR A COMBINATION OF THESE AS FOLLOWS.

1. MOIST CURING: KEEP SURFACES CONTINUOUSLY MOIST FOR NOT LESS THAN SEVEN DAYS WITH THE FOLLOWING MATERIALS:

- a. WATER.
- b. CONTINUOUS WATER-FOG SPRAY.

c. ABSORPTIVE COVER, WATER SATURATED AND KEPT CONTINUOUSLY WET. COVER CONCRETE SURFACES AND EDGES WITH 12-INCH LAP OVER ADJACENT ABSORPTIVE COVERS.

2. MOISTURE-RETAINING-COVER CURING: COVER CONCRETE SURFACES WITH MOISTURE-RETAINING COVER FOR CURING CONCRETE, PLACED IN WIDEST PRACTICABLE WIDTH, WITH SIDES AND ENDS LAPPED AT LEAST 12 INCHES, AND SEALED BY WATERPROOF TAPE OR ADHESIVE. IMMEDIATELY REPAIR ANY HOLES OR TEARS DURING CURING PERIOD USING COVER MATERIAL AND WATERPROOF TAPE.

3. CURING COMPOUND: APPLY UNIFORMLY IN CONTINUOUS OPERATION BY POWER SPRAY OR ROLLER ACCORDING TO MANUFACTURER'S WRITTEN INSTRUCTIONS. RECOAT AREAS SUBJECTED TO HEAVY RAINFALL WITHIN THREE HOURS AFTER INITIAL APPLICATION. MAINTAIN CONTINUITY OF COATING AND REPAIR DAMAGE DURING CURING PERIOD.

3.7 CONCRETE TOLERANCES

A. COMPLY WITH TOLERANCES IN ACI 117 AND AS FOLLOWS:

1. ELEVATION: 1/4 INCH.
2. THICKNESS: PLUS 3/8 INCH, MINUS 1/4 INCH.
3. SURFACE: GAP BELOW 10-FOOT- LONG, UNLEVELED STRAIGHTEDGE NOT TO EXCEED.
4. JOINT SPACING: 1/2 INCH.
5. CONTRACTION JOINT DEPTH: PLUS 1/4 INCH, NO MINUS.
6. JOINT WIDTH: PLUS 1/8 INCH, NO MINUS.

3.8 REPAIRS AND PROTECTION

A. REMOVE AND REPLACE CONCRETE PAVING THAT IS BROKEN, DAMAGED, OR DEFECTIVE OR THAT DOES NOT COMPLY WITH REQUIREMENTS IN THIS SECTION. REMOVE WORK IN COMPLETE SECTIONS FROM JOINT TO JOINT UNLESS OTHERWISE APPROVED BY ARCHITECT.

B. PROTECT CONCRETE STRUCTURES FROM DAMAGE. EXCLUDE TRAFFIC FROM STRUCTURES FOR AT LEAST 14 DAYS AFTER PLACEMENT. WHEN CONSTRUCTION TRAFFIC IS PERMITTED, MAINTAIN STRUCTURES AS CLEAN AS POSSIBLE BY REMOVING SURFACE STAINS AND SPILLAGE OF MATERIALS AS THEY OCCUR.

C. MAINTAIN CONCRETE STRUCTURES FREE OF STAINS, DISCOLORATION, DIRT, AND OTHER FOREIGN MATERIAL. SWEEP SIDEWALK NOT MORE THAN TWO DAYS BEFORE DATE SCHEDULED FOR SUBSTANTIAL COMPLETION INSPECTIONS.

END OF SECTION 32 16 00



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No.	Revisions	Date	Appr.

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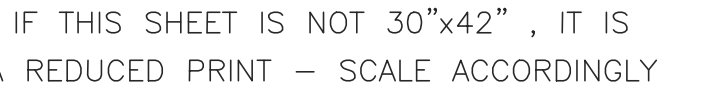
Architect/Engineer of Record:

FOR
INFORMATION
ONLY

Facility
KAISER NORTH LANCASTER
2400 LANCASTER DR NE,
SALEM, OR 97305
Project
Site Improvements

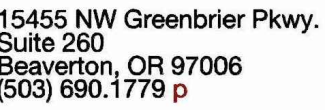
Sheet Title
SPECIFICATIONS

Building ID: NLR	Floor Levels: Site	Section: -
Scale	As Indicated	KP Project No. CAP027382
Drawn By	PT	Permit No. -
Chkd By	AC	Sheet
Issue Date	April 15th, 2024	C5.2
jjj Project No.	202010-07	



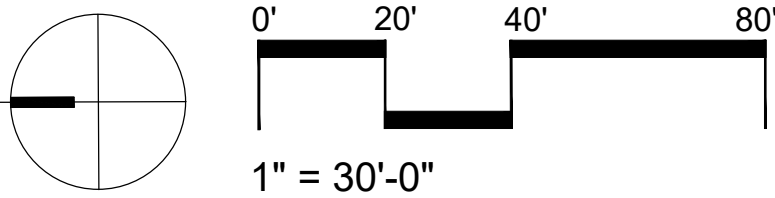
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Revisions				
No.	Revisions	By	Date	Appr.

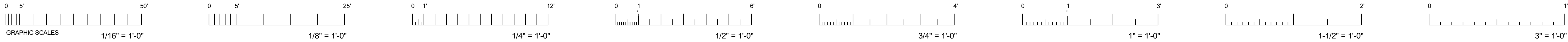


GENERAL NOTES

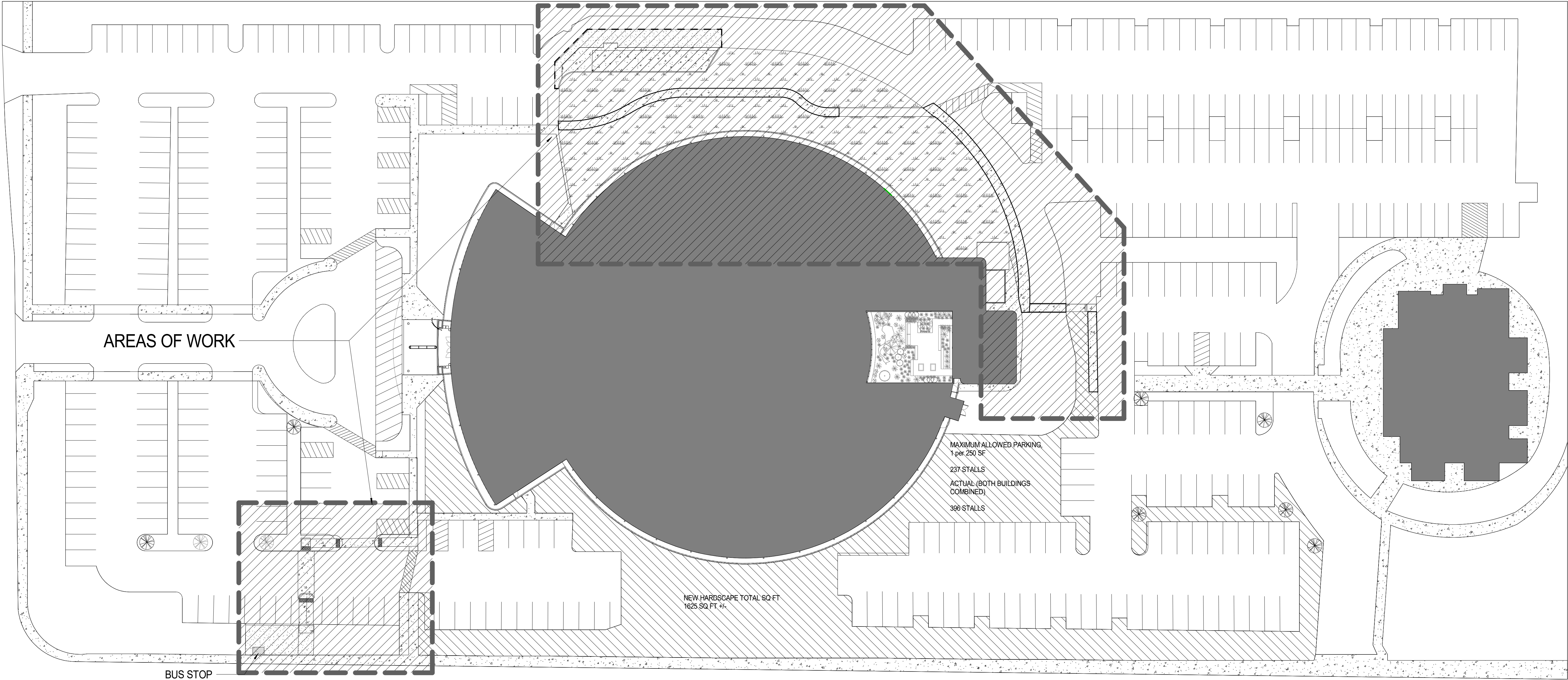
1. MINIMUM LANDSCAPE AREA REQUIRED FOR THE ZONING OF THIS MUJII PROPERTY IS 15% MINIMUM LANDSCAPE AREA PER ZONING CODE SECTION 535.015. THE MINIMUM LANDSCAPE IS MET WITH 95,764 S.F. OF LANDSCAPE OR 29.58%.
2. 8% INTERIOR PARKING LOT LANDSCAPING IS REQUIRED. THIS REQUIREMENT HAS BEEN MET. SEE CALCULATIONS IN ADJACENT CHART.
3. (1) TREE PER 12 PARKING SPACES ARE ADEQUATELY PROVIDED IN ALL PARKING LOTS.
4. PARKING LOT LANDSCAPE ISLANDS ARE A MINIMUM OF 5' WIDE ALL LARGER THAN 25 S.F..
5. LANDSCAPE "TYPE A" PLANT UNIT REQUIREMENTS INCLUDE MIN. (1) PLANT UNIT PER (20) SQUARE FEET OF LANDSCAPED AREA.
6. PLANT UNIT CALCULATIONS ARE MADE PER TABLE 807-2 "PLANT MATERIALS AND MINIMUM PLANT UNIT VALUES", SALEM CODE OF ORDINANCES, CHAPTER 807.
7. THERE ARE AN ESTIMATED 589 EXISTING SHRUBS WHICH ARE NOT COUNTED IN THE "PLANTING REQUIREMENT CALCULATIONS" SAME PAGE. AT 5 PLANT UNITS PER SHRUB, AN ADDITIONAL 2,945 PLANT UNITS COULD BE ADDED. SINCE THE SHRUB TOTAL IS ESTIMATED, WE ARE ONLY COUNTING THESE AREAS AS GROUND COVER AND THE MINIMUM PLANT UNIT REQUIREMENT IS STILL MET.



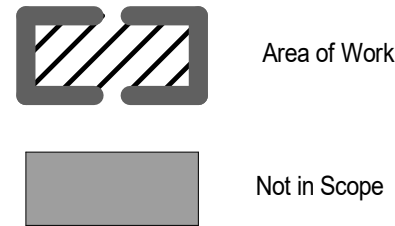
Fac No:	Fac No	Bldg No:	Bldg No	Floor Lev:	1	Section:	Section
Scale	As Shown	DCA No.	DCA No	Permit No.	Permit No	Sheet	
Drawn By	DE	<div style="font-size: 48pt; text-align: center;">L1.01</div>					
Checked By	DE						
Issue Date	04.09.24						
		Of	Sheets				



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Scoping Plan Legend:



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architects, llc

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Suite 200
Beaverton, OR 97006
(503) 690.1779 p

1 Scoping Plan
1" = 30'-0"

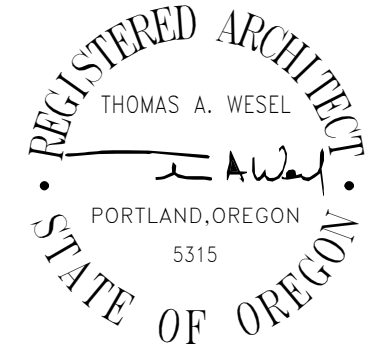


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Architect/Engineer of Record:



Facility
North Lancaster Medical Office
Salem, Oregon

Project
Site Improvements

Sheet Title
Scoping Plan

Building ID: NLR	Floor Levels: Site	Section: -
Scale	As indicated	kP Project No. CAP027382
Drwn By	Author	Permit No. -
Chkd By	Checker	Sheet
Issue Date	April 15, 2024	A0.1-7
jnj Project No.	202010-07	



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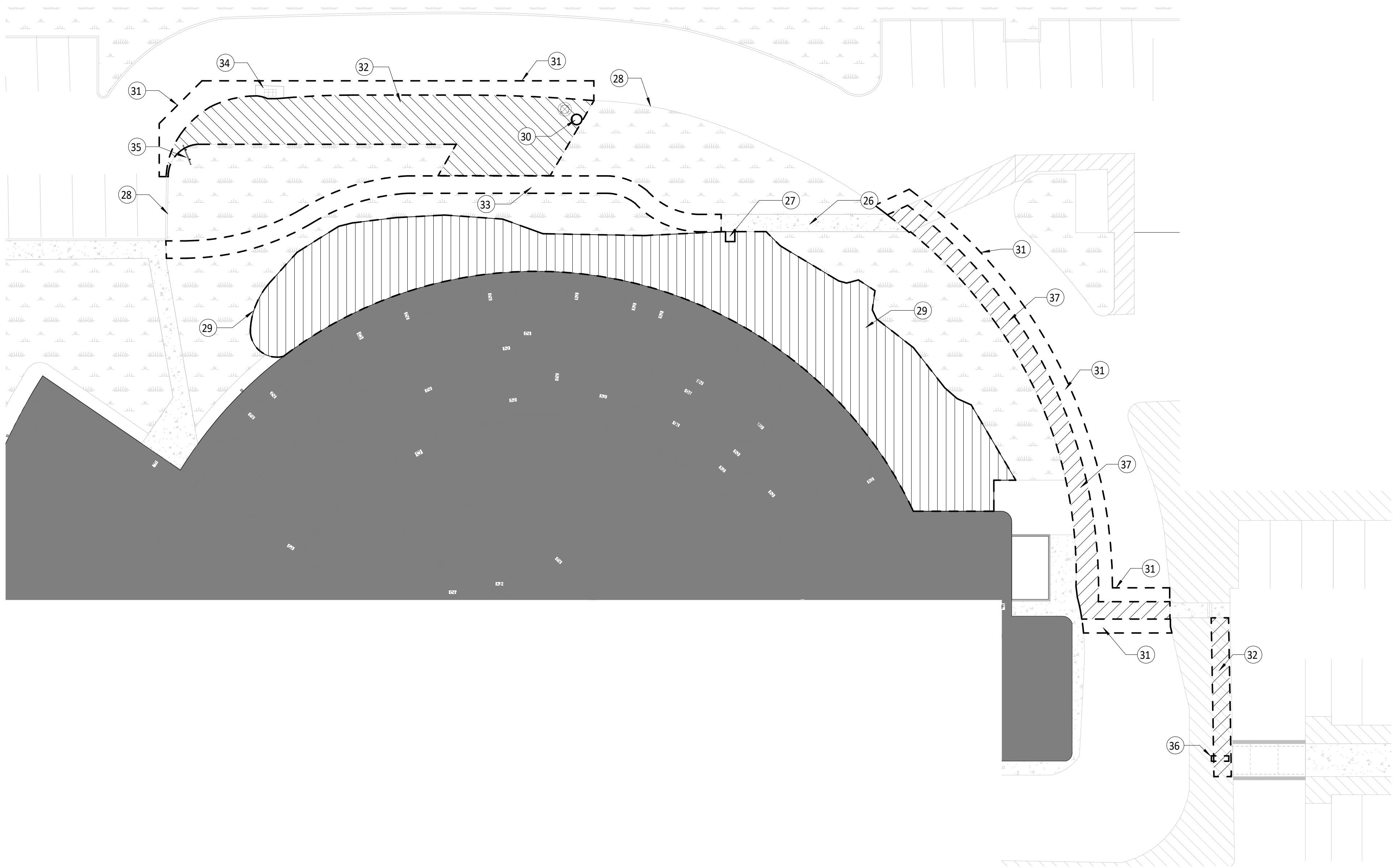
Demolition Site Plan Legend:

- Existing Asphalt to be Demolished
- Existing Curb & Grass to be Demolished
- Existing Vines to be Demolished
- Existing Light Pole to be Demolished

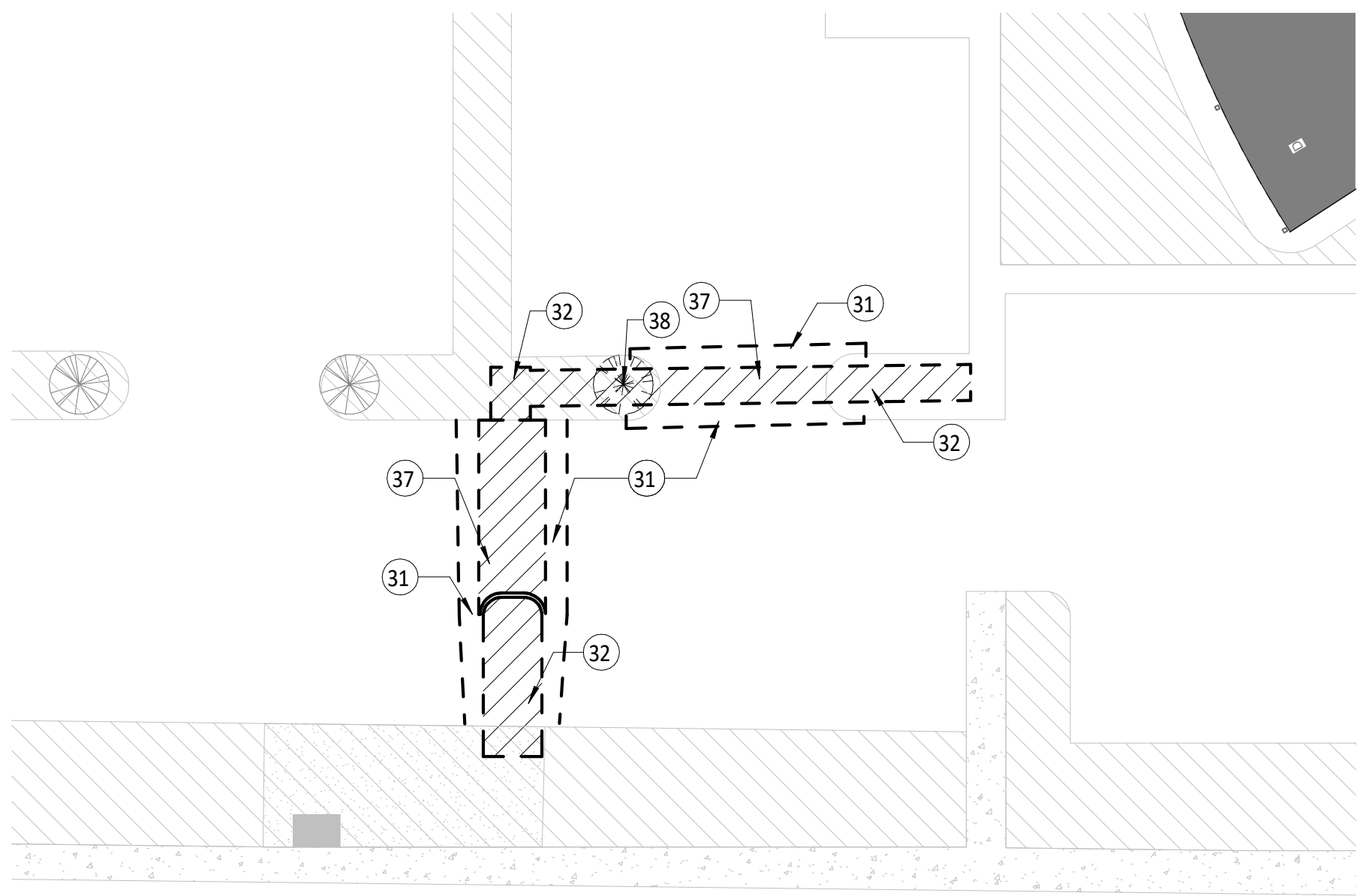
Demolition Site Plan Key Notes: ④

Note: Keynotes shown applied to this sheet only.

- 26 Preserve this section of existing sidewalk.
- 27 Remove existing concrete planter.
- 28 Protect existing driveway and/or curbs from damage.
- 29 Remove portion of vines; Prepare for new sod.
- 30 Salvage existing light pole for reuse and demolish concrete foundation. Salvage and retain electrical connection as it powers other parking light fixtures; Refer to electrical for junction box.
- 31 Saw cut boundary.
- 32 Remove portion of landscaping and concrete curb; prepare for new concrete pad.
- 33 Remove existing portion of grass; prepare for new concrete sidewalk.
- 34 Protect existing catch basin.
- 35 Salvage existing signage for relocation; repair landscaping and replace with new sod.
- 36 Salvage existing signage for relocation
- 37 Remove portion of asphalt; prepare for new concrete walkway.
- 38 Remove tree and stump to make way for the concrete sidewalk.



1 Enlarged Site Demolition Plan - East
1" = 20'-0"



2 Enlarged Site Demolition Plan - West
1" = 20'-0"

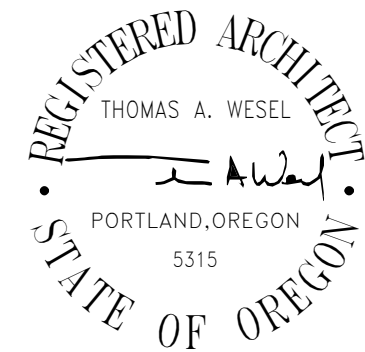


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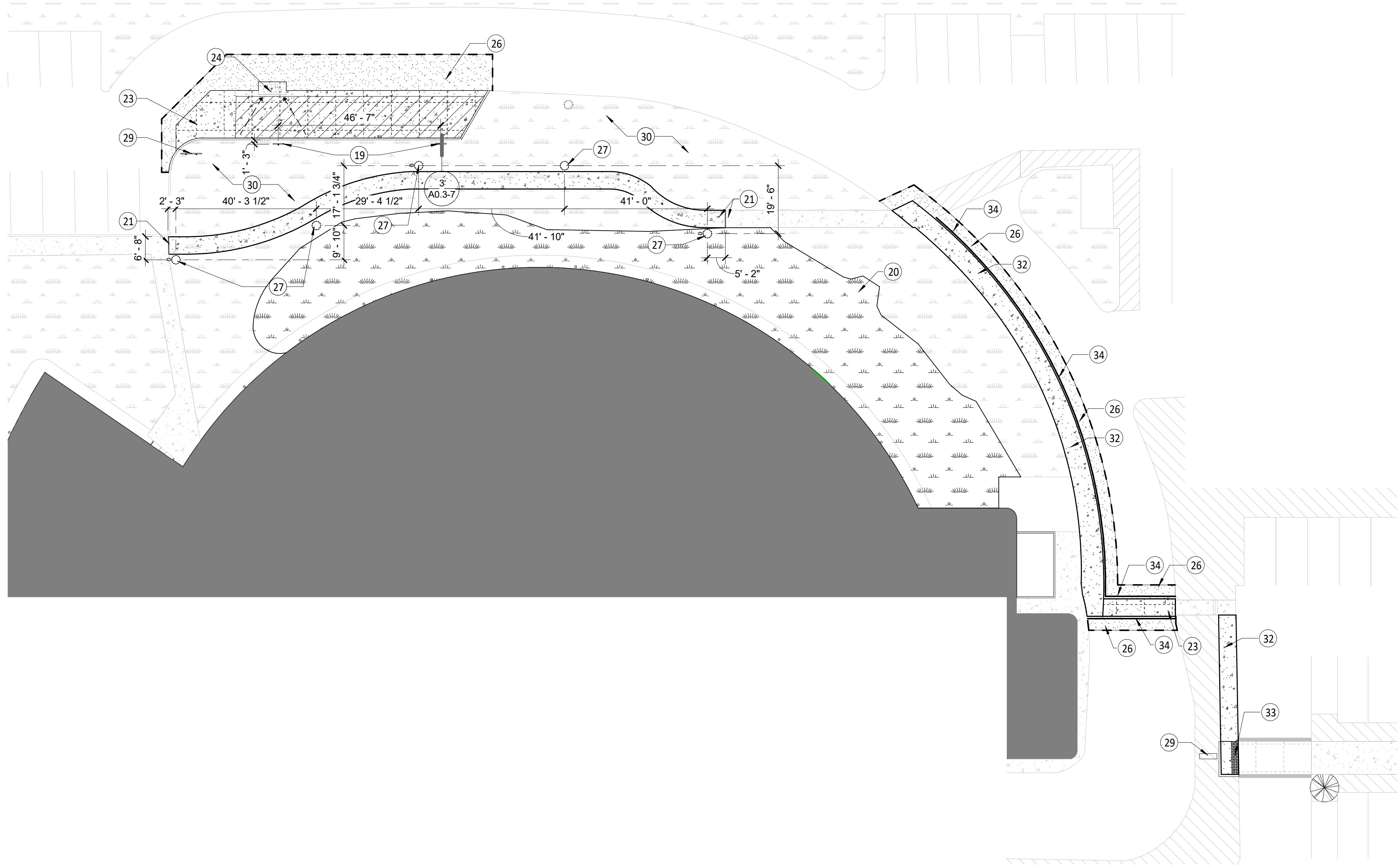
Project
Site Improvements

Sheet Title
Demolition Plans

Building ID: NLR	Floor Levels: Site	Section: -
Scale	As indicated	KP Project No. CAP027382
Drwn By	Author	Permit No. -
Chkd By	Checker	Sheet
Issue Date	April 15, 2024	A0.2-7
jnj Project No.	202010-07	



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Site Plan Legend:

- Saw Cut Line
- Existing Landscaping
- New Sod (Match Existing)
- New Concrete Sidewalk
- New Heavy Concrete Pavement
- New Asphalt
- Parking Signage

Site Plan Key Notes:

Note: Keynotes shown applied to this sheet only.

- Provide and install parking sign that states "Reserved Parking" - verify name with owner before placing order.
- Provide and install new sod in place where vine was removed; blend in with existing grass.
- Install concrete sidewalk; connect to existing concrete sidewalk; refer to civil drawings
- Construct heavy concrete pavement; refer to civil drawings
- Catch basin to remain; slope / direct water to basin; refer to civil drawings
- Provide and install asphalt to blend in with existing asphalt and new heavy concrete pavement.
- Provide and install new outdoor light poles; Refer to electrical drawings.
- Provide and install handrail; refer to civil.
- Reinstall salvaged sign; verify location & orientation with owner.
- Repair/replace any damaged sod incurred during demolition phase.
- Install concrete walkway; connect to existing sidewalk/walkway; refer to civil drawings
- Provide and install tactile warning; refer to civil.
- Install new 4" wide white striping



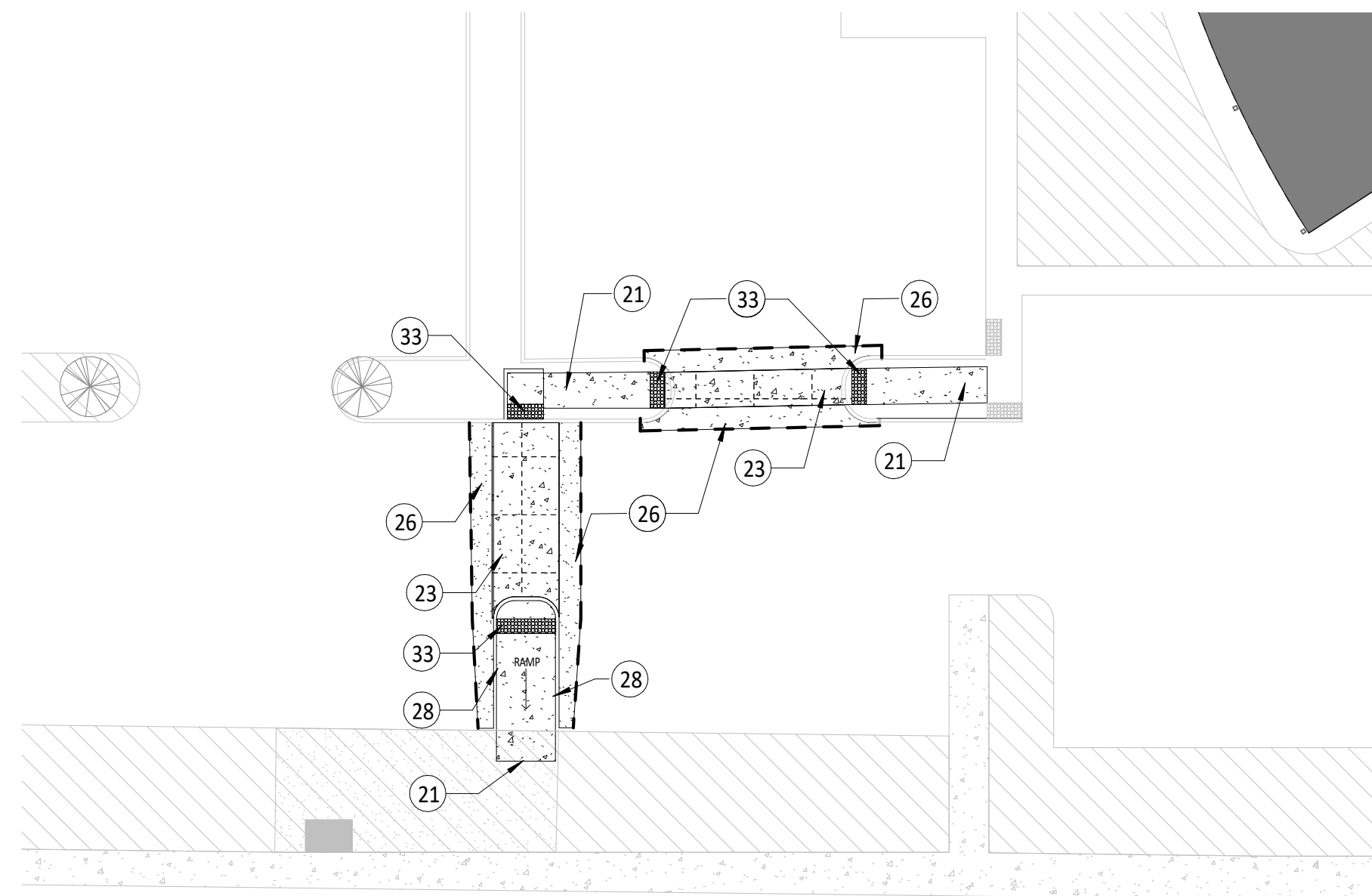
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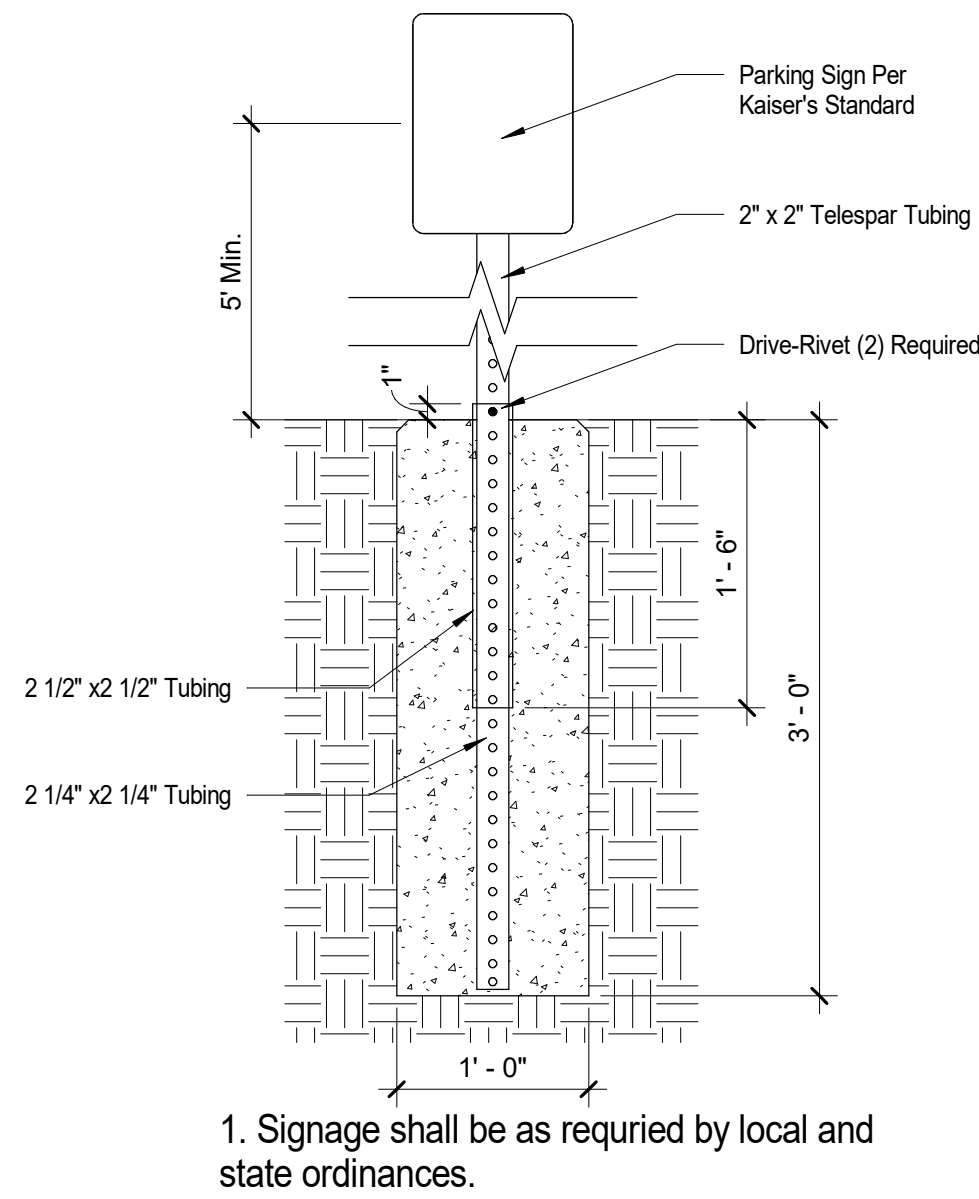


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1 Enlarged Site Plan - East
1" = 20'-0"



2 Enlarged Site Plan - West
1" = 20'-0"



1. Signage shall be as required by local and state ordinances.

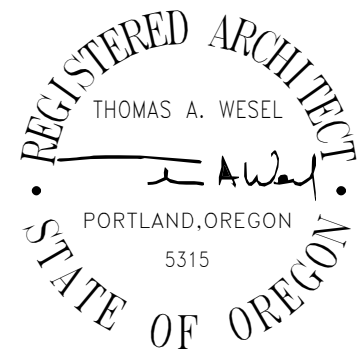
3 Parking Sign Pole
1" = 1'-0"

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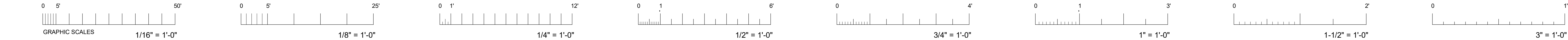


Facility
North Lancaster Medical Office
Salem, Oregon

Project
Site Improvements

Sheet Title
New Enlarged Plans

Building ID: NLR	Floor Levels: Site	Section: -
Scale	As indicated	KP Project No. CAP027382
Drwn By	Author	Permit No. -
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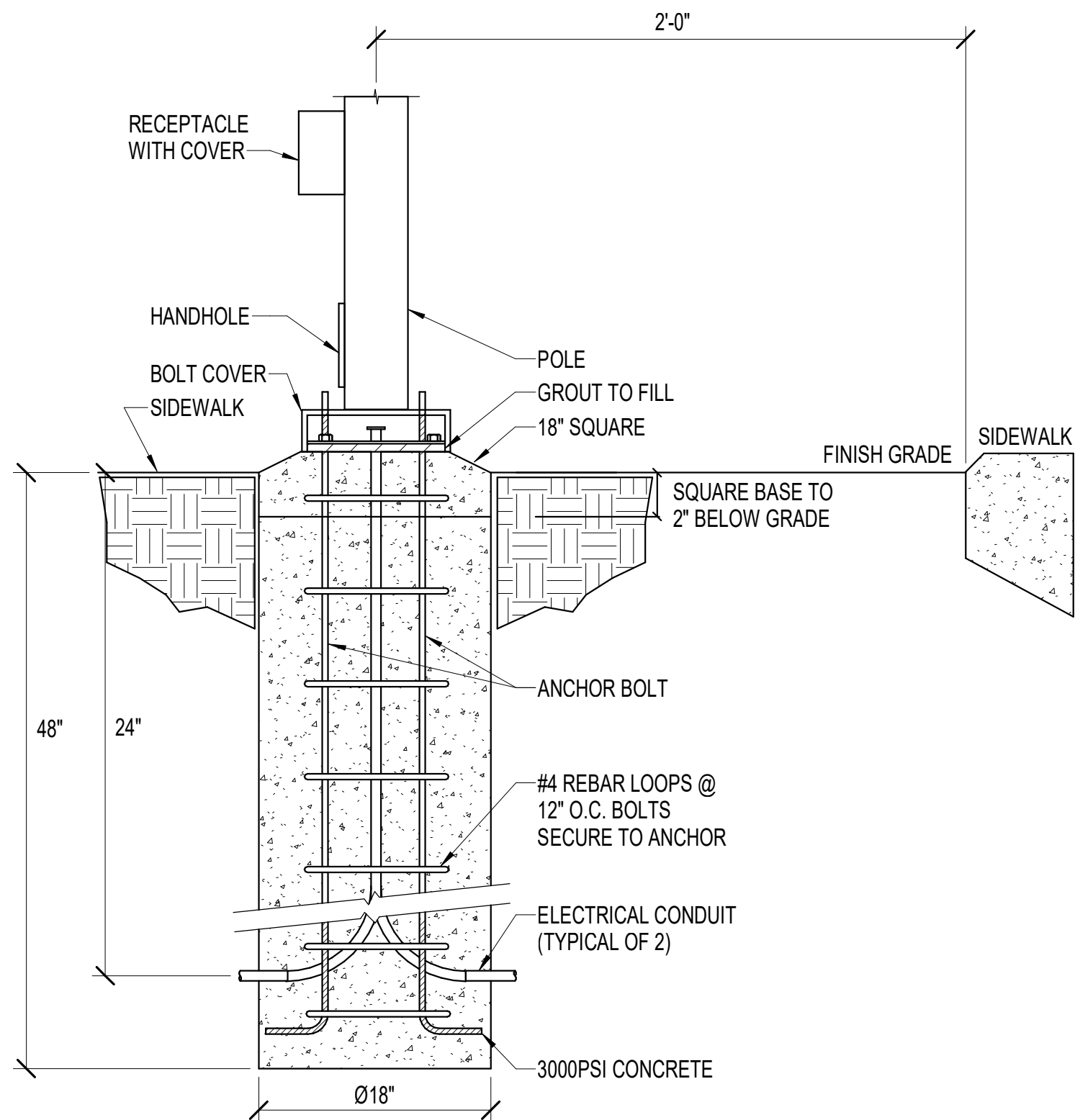
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NOTES:

- CONCRETE BASE / FOOTING DESIGN SHALL BE VERIFIED AND APPROVED BY A STRUCTURAL ENGINEER PRIOR TO CONSTRUCTION. CONTRACTOR IS RESPONSIBLE FOR COORDINATING ALL POLE REQUIREMENTS WITH THE MANUFACTURER AND LOCAL AUTHORITY HAVING JURISDICTION AND SHALL MEET ALL APPLICABLE CODES.
- DIMENSIONS SHOWN ARE FOR REFERENCE ONLY. DIMENSIONS MAY BE ADJUSTED BASED ON INPUT FROM ARCHITECT AND STRUCTURAL ENGINEER BASED ON SITE, POLE, AND LUMINAIRE PROPERTIES.

1 LIGHTING POLE BASE FLUSH
1/8" = 1'-0"

ABBREVIATIONS - ELECTRICAL

AFF	ABOVE FINISHED FLOOR	KVAR	KILOVOLT-AMPERE REACTIVE
ADA	AMERICANS DISABILITIES ACT	LA	LIGHTNING ARRESTOR
A	AMPERE (AMP)	LED	LIGHT EMITTING DIODE
AL	ALUMINUM	LRC	LIGHTING RELAY CONTROL PANEL
ARCH	ARCHITECT / ARCHITECTURAL	LTG	LIGHTING
ATS	AUTOMATIC TRANSFER SWITCH	LV	LOW VOLTAGE
AWG	AMERICAN WIRE GAUGE	MATV	MASTER ANTENNA TELEVISION
C	CONDUIT	MAX	MAXIMUM
CAT	CATEGORY CABLE	MCA	MINIMUM CIRCUIT AMPACITY
CB	CIRCUIT BREAKER	MCB	MAIN CIRCUIT BREAKER
CCTV	CLOSED CIRCUIT TELEVISION	MCC	MOTOR CONTROL CENTER
CKT	CIRCUIT	MDP	MAIN DISTRIBUTION PANEL
CLG	CEILING	MECH	MECHANICAL
CT	CURRENT TRANSFORMER	MH	METAL HALIDE
CU	COPPER	MIN	MINIMUM
DN	DOWN	MLO	MAIN LUGS ONLY
DW	DISHWASHER	MOCP	MAXIMUM OVERCURRENT PROTECTION
EM	EMERGENCY	MTS	MANUAL TRANSFER SWITCH
EMT	ELECTRICAL METALLIC TUBING	MV	MEDIUM VOLTAGE
EP	EXPLOSION PROOF	MW	MICROWAVE
EPO	EMERGENCY POWER OFF	NIC	NOT IN CONTRACT
EW	ELECTRIC WATER COOLER	NL	NIGHT LIGHT CIRCUIT
FA	FIRE ALARM	PA	PUBLIC ADDRESS
FLA	FULL LOAD AMPS	PDZ	PRIMARY DAYLIGHT ZONE
FLUOR	FLUORESCENT	PE	PHOTOELECTRIC CELL
FOIC	FURNISHED BY CONTRACTOR	PF	POWER FACTOR
FOIC	INSTALLED BY CONTRACTOR	PFL	PANELBOARD
FOIC	FURNISHED BY OWNER	PVC	POLYVINYL CHLORIDE
FOIC	INSTALLED BY CONTRACTOR	PWR	POWER
FOIC	FURNISHED BY OWNER	REF	REFRIGERATOR
FOIC	INSTALLED BY OWNER	SDP	SUB-DISTRIBUTION PANEL
GD	GARBAGE DISPOSAL	SDZ	SECONDARY DAYLIGHT ZONE
GEN	GENERATOR	STR	STARTER
GFP	GROUND FAULT PROTECTION	SV	SOLENOID VALVE
GFI	GROUND FAULT INDICATOR	SW	SWITCH
GFCI	GROUND FAULT CIRCUIT INTERRUPTER	TD	TIME DELAY
GRC	GALVANIZED RIGID CONDUIT	TP	TAMPERPROOF
GND	GROUND	TTB	TELEPHONE TERMINAL BOARD
HP	HORSEPOWER	TTC	TELEPHONE TERMINAL CABINET
HPS	HIGH PRESSURE SODIUM	TV	TELEVISION
HV	HIGH VOLTAGE	TYP	TYPICAL
HZ	HERTZ	UG	UNDERGROUND
IG	ISOLATED GROUND	UPS	UNINTERRUPTIBLE POWER SUPPLY
INC	INCANDESCENT	V	VOLTAGE
INV	INVERTER	VA	VOLT-AMPERE
JB	JUNCTION BOX	VFD	VARIABLE FREQUENCY DRIVE
KW	KILOWATT	VP	VAPORPROOF
KWH	KILOWATT HOUR	W	WATTS
KV	KILOVOLT	WP	WEATHERPROOF
KVA	KILOVOLT-AMPERE	XFMR	TRANSFORMER

DESIGNATION SYMBOLS

---	123	EQUIPMENT DESIGNATOR SEE SCHEDULE.
(E)	(X)	EXISTING TO REMAIN, EXISTING TO BE REMOVED
(R)	(F)	EXISTING TO BE RELOCATED, FUTURE
(N)	●	NEW, POINT OF CONNECTION
①		NOTE

POWER - PLANS

⊕	⊕	WALL RECEPTACLE: DUPLEX, QUADPLEX
⊕	⊕	SINGLE WALL RECEPTACLE, FACELESS GFCI REMOTE TEST BUTTON
⊕	G	— DENOTES GFCI
⊕	W	— DENOTES GFCI AND WEATHER PROOF
⊕	⊕	— DENOTES RECEPTACLE ABOVE COUNTER
⊕	⊕	SPECIAL PURPOSE RECEPTACLE.
⊕	⊕	CEILING RECEPTACLE: DUPLEX, QUADPLEX
FB1	FB2	FLUSH FLOORBOX RECEPTACLE. REFER TO SCHEDULE FOR QUANTITY AND TYPES OF DEVICES.
PT1	PT2	FLUSH POKE-THROUGH RECEPTACLE. REFER TO SCHEDULE FOR QUANTITY AND TYPES OF DEVICES.
⊕	⊕	— DENOTES SPLIT-WIRED, HALF SWITCHED / CONTROLLED VIA MANUAL CONTROL, MOTION CONTROL OR TIME-BASED CONTROL. SEE SPECIFICATIONS & PLANS.
⊕	⊕	— DENOTES FULL SWITCHED / CONTROLLED VIA MANUAL CONTROL, MOTION CONTROL OR TIME-BASED CONTROL. SEE SPECIFICATIONS & PLANS.
FB3	FB4	SWITCHED / CONTROLLED FLUSH FLOORBOX RECEPTACLE REFER TO SCHEDULE & PLANS FOR CONTROL INFORMATION.
PT3	PT4	SWITCHED / CONTROLLED FLUSH POKE-THROUGH RECEPTACLE REFER TO SCHEDULE & PLANS FOR CONTROL INFORMATION.
FB1	X	— LETTER DESIGNATOR:
PT1	X	E = EMERGENCY U = UPS S = STANDBY C = CRITICAL
⊕	⊕	IG = ISOLATED GROUND P = SURGE PROTECTIVE DEVICE A = AFCI B = WITH USB OUTLETS
⊕	42	— DENOTES PANELBOARD AND CIRCUIT NUMBER.
⊕	42	— DENOTES CIRCUIT NUMBER. REFER TO SHEET GENERAL NOTES FOR PANELBOARD.
⊕	1,3,5	— PEDESTAL OUTLET: POWER & SIGNAL COMBINATION
⊕	1,3,5	— SURFACE OUTLET STRIP: DIMENSION AS SHOWN. SEE SPECIFICATIONS.
⊕	1,3,5	— POWER POLE, POWER, COMBINATION CIRCUITS AS INDICATED.
⊕	1,3,5	— JUNCTION BOX
⊕	1,3,5	— JUNCTION BOX HOME RUN. CIRCUITS AS INDICATED.
⊕	1,3,5	— JUNCTION BOX HOME RUN & FURNITURE FEED. CIRCUITS AS INDICATED.
⊕	1,3,5	— CONNECTION TO EQUIPMENT PROVIDED BY OTHERS
⊕	1,3,5	— PUSH BUTTON STATION: SINGLE, DOUBLE
⊕	1,3,5	— ELECTRICAL EQUIPMENT
⊕	1,3,5	— PANELBOARD: SURFACE, RECESSED
⊕	1,3,5	— ENCLOSURE: SURFACE, RECESSED
⊕	1,3,5	— TRANSFORMER
⊕	1,3,5	— GROUND ROD, IN TEST WELL
⊕	1,3,5	— GROUND PAD

GENERAL NOTES:

- THIS IS A STANDARD LEGEND SHEET, THEREFORE, SOME SYMBOLS MAY APPEAR ON THIS SHEET THAT DO NOT APPEAR ON THE DRAWINGS.
- PROVIDE AN EQUIPMENT GROUNDING CONDUCTOR THROUGH THE LIGHTING HOMERUN AND THE ENTIRE BRANCH CIRCUIT.
- PROVIDE FIRESTOPPING AT PENETRATIONS THROUGH RATED STAIR ENCLOSURES, RATED EGRESS CORRIDORS, RATED SHAFTS, FLOOR, AND CEILING ASSEMBLIES.
- COORDINATE WITH OWNER SO THAT WORK CAN BE SCHEDULE NOT TO INTERRUPT OPERATIONS, NORMAL ACTIVITIES, BUILDING ACCESS, ACCESS TO DIFFERENT AREAS.
- COORDINATE LOCATION OF EXISTING UTILITY AND EQUIPMENT PRIOR TO COMMENCEMENT OF WORK. COMPENSATE THE OWNER FOR DAMAGES CAUSED BY THE FAILURE TO LOCATE AND PRESERVE UTILITIES. REPLACE DAMAGED ITEMS WITH NEW MATERIAL TO MATCH EXISTING.
- PROVIDE UPDATED PANEL SCHEDULE AND DIRECTORY IN PANELBOARD.

LIGHTING

EMERGENCY	NORMAL	
●	○	DOWNLIGHT RECESSED: ROUND, SQUARE
●	○	DOWNLIGHT RECESSED WALLWASH: ROUND, SQUARE
●	○	DOWNLIGHT RECESSED ADJUSTABLE: ROUND, SQUARE
●	○	DOWNLIGHT SURFACE: ROUND, SQUARE
●	○	DOWNLIGHT SURFACE WALLWASH: ROUND, SQUARE
●	○	DOWNLIGHT SURFACE ADJUSTABLE: ROUND, SQUARE
●	○	PENDANT
●	○	PENDANT WALLWASH
●	○	LINEAR RECESSED
●	○	LINEAR RECESSED WALLWASH
●	○	LINEAR SURFACE
●	○	LINEAR SURFACE WALLWASH
●	○	LINEAR PENDANT
●	○	LINEAR PENDANT WALLWASH
●	○	LINEAR WALL MOUNTED
●	○	LINEAR WALL MOUNTED ASYMMETRIC
●	○	TAPE LIGHT (EM PER TAG)
●	○	TRACK HEAD
●	○	TRACK
●	○	TRACK WITH CURRENT LIMITER
●	○	TRACK SLOT
●	○	LINEAR RECESSED MULTHEAD
●	○	STEPLIGHT
●	○	SCONCE
●	○	FLOOD LIGHT
●	○	INGRADE: ROUND, SQUARE
●	○	INGRADE ADJUSTABLE: ROUND, SQUARE
●	○	FLOOR LAMP
●	○	CATENARY
●	○	EMERGENCY LIGHT
●	○	EXIT SIGN TOP MOUNT (ARROWS PER DRAWING)
●	○	EXIT SIGN BACK MOUNT (ARROWS PER DRAWING)
●	○	EXIT SIGN SIDE MOUNT (ARROWS PER DRAWING)
●	○	BOLLARD: ROUND, SQUARE (ARROWS PER DRAWING)
●	○	PEDESTRIAN POLE: ROUND, SQUARE
●	○	POLE: ROUND, SQUARE
●	○	CONTROL STATION. REFER TO LIGHTING CONTROL STATION SCHEDULE.
●	○	WALL SWITCH: 1 POLE, 2 POLE
●	○	WALL SWITCH: 3 WAY, 4 WAY
●	○	WALL SWITCH: KEY LOCK, MOMENTARY
●	○	WALL SWITCH: LOW VOLTAGE, PILOT
●	○	WALL SWITCH: TIMER, MANUAL DIMMER
●	○	WALL COMBINATION OCCUPANCY SWITCH, OCCUPANCY DIMMER
●	○	WALL COMBINATION VACANCY SWITCH, VACANCY DIMMER
●	○	PHOTOELECTRIC CELL: WALL MOUNTED, CEILING MOUNTED
●	○	OCCUPANCY SENSOR: WALL MOUNTED, CEILING MOUNTED
●	○	VACANCY SENSOR: WALL MOUNTED, CEILING MOUNTED
●	○	"X" DESIGNATES DEVICE TYPE:
●	○	DUAL TECHNOLOGY UNLESS OTHERWISE NOTED:
●	○	U: ULTRASONIC R: INFRARED
●	○	DESIGNATES LUMINAIRE TYPE (SEE LUMINAIRE SCHEDULE)
●	○	DESIGNATES EMERGENCY CIRCUIT
●	○	DESIGNATES LIFE SAFETY CIRCUIT, CRITICAL CIRCUIT
●	○	DESIGNATES STANDALONE CONTROL ZONE.
●	○	DESIGNATES LIGHTING CIRCUIT, PANEL CIRCUIT.
●	○	DESIGNATES NETWORK CONTROL ZONE. REFER TO LIGHTING MASTER CONTROL STATION SCHEDULE.
●	○	REFER TO ZONE SCHEDULE FOR CIRCUITING OF NETWORKED LIGHTING.

ELECTRICAL SHEET LIST

SHEET #	SHEET NAME
E001	SYMBOLS, LEGENDS AND ABBREVIATIONS - ELECTRICAL
E010	SITE PLAN - ELECTRICAL
Grand total: 2	

LUMINAIRE SCHEDULE

FIXTURE TYPE	IMAGE	PRODUCT DESCRIPTION	CONTROLS	BASIS OF DESIGN MANUFACTURER	SIZE	INPUT WATTS	LAMP SOURCE	POWER SUPPLY	INPUT VOLTAGE	FINISH	MOUNTING	ALTERNATE MANUFACTURER(S)	NOTES
S1		DECORATIVE PEDESTRIAN POLE LUMINAIRE	NIGHT AIR ENABLED VIA REMOTE POWER PACK	LOUIS POULSEN LP NEST	29.5" D x 13.0" T 10" ROUND POLE	40 W	LED 3000 LUMENS 4000 K 80+ CRI	0-10V DIMMING TO 10% INTEGRAL ELECTRONIC DRIVER	120-277V	STANDARD AS SELECTED BY ARCHITECT	TOP OF: 4.5" D x 10.0" T ALUMINUM POLE	NO ALTERNATES	PROVIDE ADDITIONAL HANDHOLE FOR 120V DUPLEX RECEPTACLE

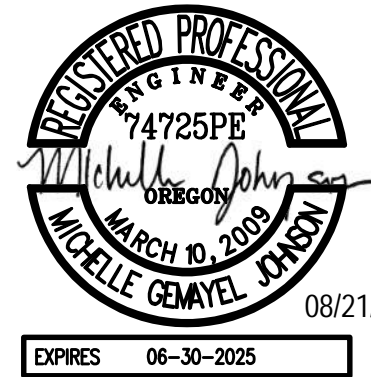
GENERAL NOTES

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Project Architect Approval:

Architect/Engineer of Record:



Facility
North Lancaster Medical Office

Salem, Oregon

Project
Site Improvements

Sheet Title
SYMBOLS, LEGENDS
AND ABBREVIATIONS
- ELECTRICAL

Building ID: NLR	Floor Levels: Site	Section: -
Scale: 1/8" = 1'-0"	KP Project No. CAP027382	Permit No. -
Drawn By: Author	Author	Sheet
Chkd By: Checker	Checker	
Issue Date: August 18, 2023		E001
Jij Project No. 202010-07		



IF THIS SHEET IS NOT 30"x42", IT IS
A REDUCED PRINT - SCALE ACCORDINGLY



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GENERAL NOTES:

- REFER TO ARCHITECTURAL SET FOR DEMOLISHION SCOPE OF WORK.
- REFER TO ARCHITECTURAL SET FOR DIMENSIONS OF LIGHT POLE LOCATION.
- CONTROL SEQUENCE OF OPERATIONS:
 - PHOTOCELL: ON AT DUSK, OFF AT DAWN.
 - LOCAL LOW-VOLTAGE SWITCH FOR OVERRIDE CONTROL OF PHOTOCELL INPUT.
- PROVIDE TRENCHING AND BACKFILL OF SITE AS REQUIRED FOR NEW INSTALLATION.
- LOCATION OF EXISTING EQUIPMENT, CONDUIT, LIGHTING POLES IS DIAGRAMATIC. FIELD VERIFY FOR EXACT LOCATION.

NOTES:

- REFER TO POLE BASE MOUNTING DETAIL ON SHEET E001. VERIFY DIMENSIONS ARE SUITABLE FOR PROJECT SITE WITH STRUCTURAL ENGINEER.
- PROVIDE IN-GRADE ELECTRICAL BOX LOCATED APPROXIMATELY 2'-0" FROM LUMINAIRE POLE BASE.
- TRANSITION BRANCH CIRCUIT TO INDOOR AND ROUTE CONCEALED ABOVE ACCESSIBLE CEILING TO PANEL 2P6A. PREFERENCE IS FOR CONDUIT TRANSITION TO HAPPEN AT THE BASE OF THE EXTERIOR WALL AND ROUTE VERTICALLY WITHIN THE WALL CAVITY TO AVOID EXPOSED, SURFACE-MOUNTED CONDUIT ON EXTERIOR OF THE BUILDING.
- MINIMUM 1" C. WITH 10 AWG CONDUCTORS FOR RECEPTACLE CIRCUIT, 12 AWG CONDUCTORS FOR LIGHTING CIRCUIT.
- PROVIDE TWO DEDICATED 120V, 20A CIRCUIT USING AVAILABLE SPARE CIRCUIT BREAKERS. ONE CIRCUIT FOR THE PEDESTRIAN LIGHTS, ONE CIRCUIT FOR THE RECEPTACLES.
- PROVIDE 120V, 20A TOGGLE SWITCH FOR CONTROL OF POLE-BASE RECEPTACLES. LOCATE WITHIN ENGINEERING SHOP ROOM ADJACENT EXISTING EXHAUST FAN TOGGLE SWITCH.
- PROVIDE NIGHT POWER PACK AND EXTERIOR PHOTOCELL KIT FOR CONTROL OF PEDSTRIAN POLE LIGHTS. LIGHTS TO TURN ON AND OFF BASED ON AVAILABLE DAYLIGHT VIA PHOTOCELL INPUT. REFER TO BLOCK DIAGRAM ON THIS SHEET FOR ADDITIONAL INFORMATION.
- PROVIDE RECEPTACLE WITHIN LIGHTING POLE. PROVIDE WEATHERPROOF WHILE IN-USE COVER. MOUNT RECEPTACLE AT APPROXIMATELY +36" FROM BOTTOM OF POLE.
- ESTIMATED ROUTE OF EXISTING PARKING LOT LIGHTING CIRCUIT. DEPTH ESTIMATED AT 2'-0". EXCAVATION IS OCCURRING WITHIN THIS AREA TO ACCOMMODATE NEW PARKING STALLS. PROVIDE ALLOWANCE FOR ADDITIONAL TRENCHING AND RE-INSTALLATION OF PARKING LOT LIGHTING CONDUIT IF FINAL GRADE IS LOWER THAN THE EXISTING INSTALLED DEPTH OF CONDUIT.
- RELOCATE EXISTING PARKING LOT POLE EAST TO BE CLEAR OF NEW PARKING STALL. PROVIDE IN-GRADE, TRAFFIC-RATED SPLICE BOX AND CONDUIT TO EXTEND EXISTING CIRCUIT TO NEW POLE LOCATION. MATCH EXISTING CONDUIT AND CONDUCTOR PROPERTIES.

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Project Architect Approval:

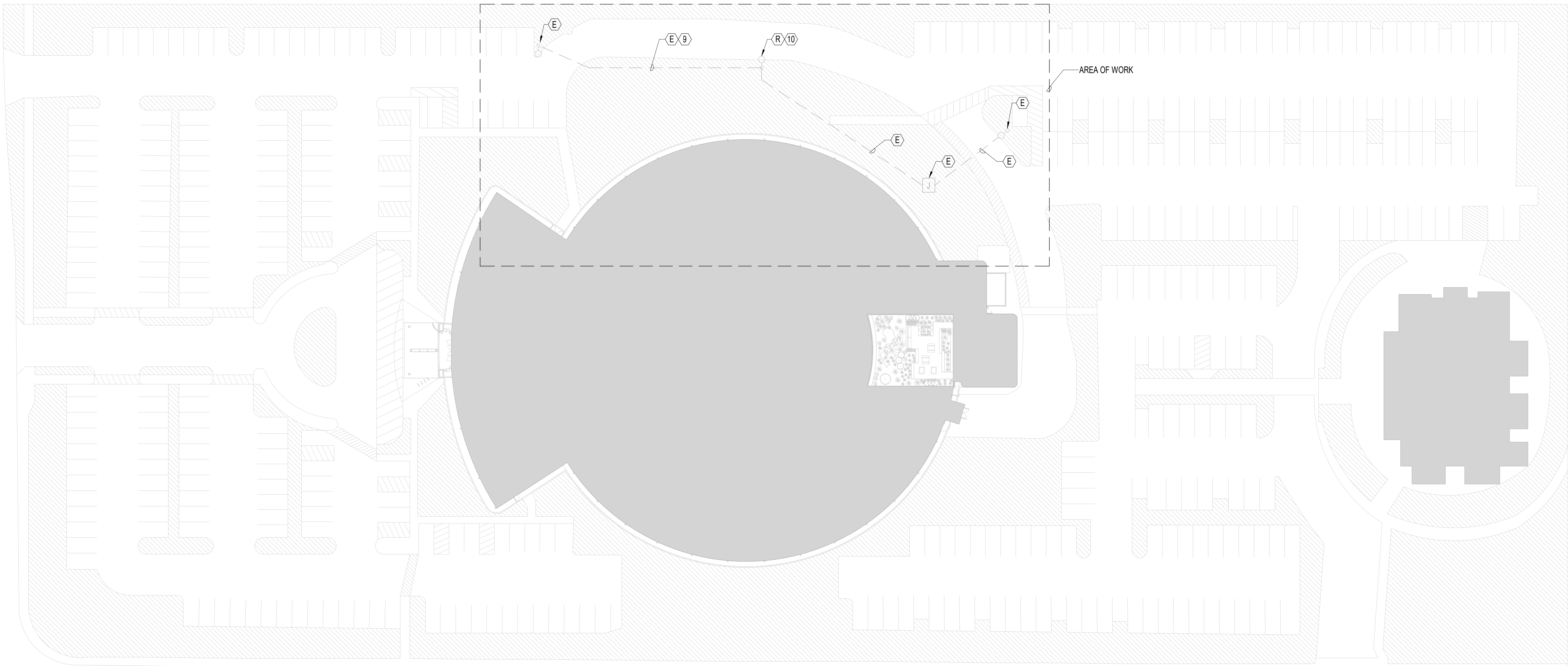
Architect/Engineer of Record:



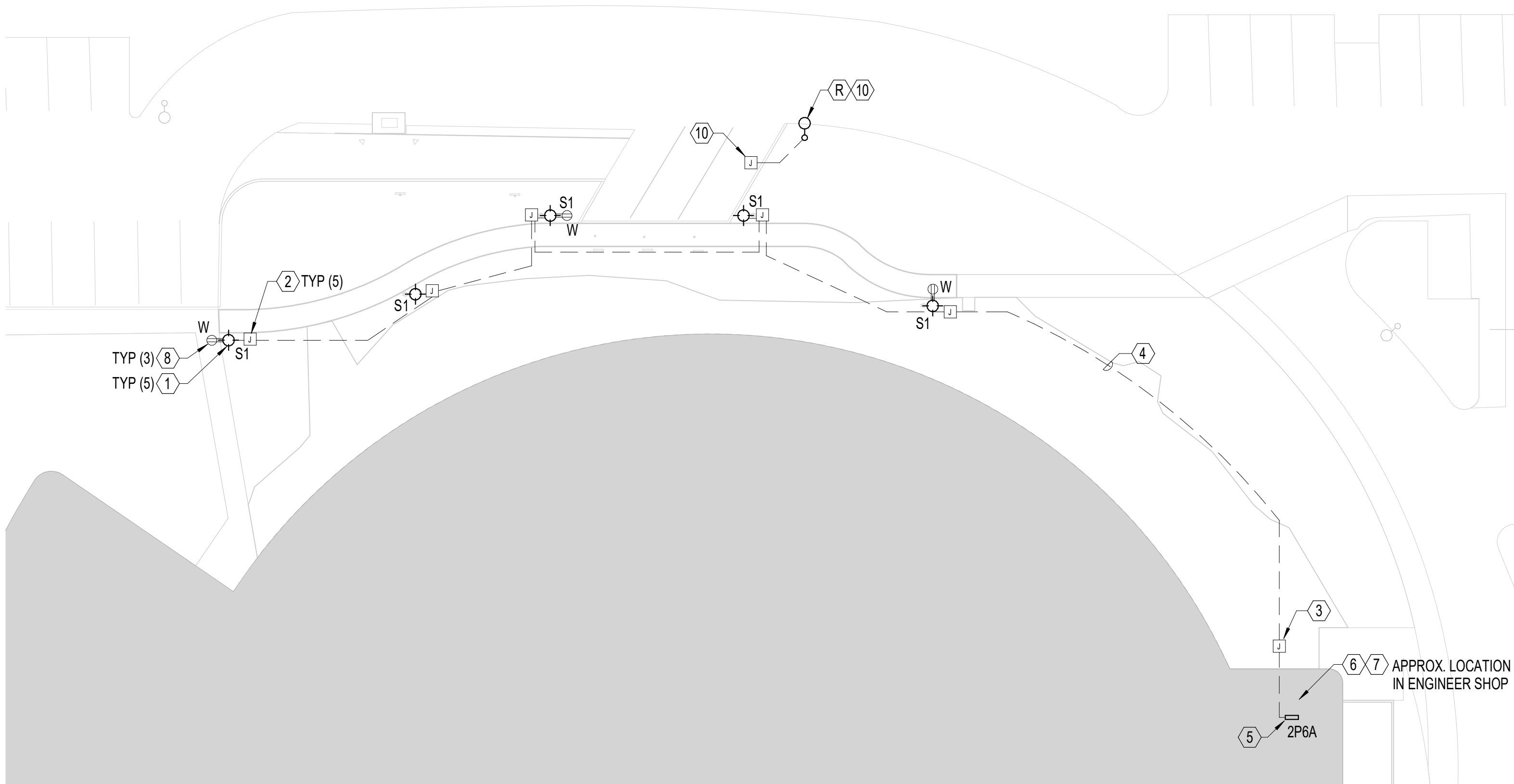
Facility
North Lancaster Medical Office
Salem, Oregon
Project
Site Improvements

Sheet Title
SITE PLAN -
ELECTRICAL

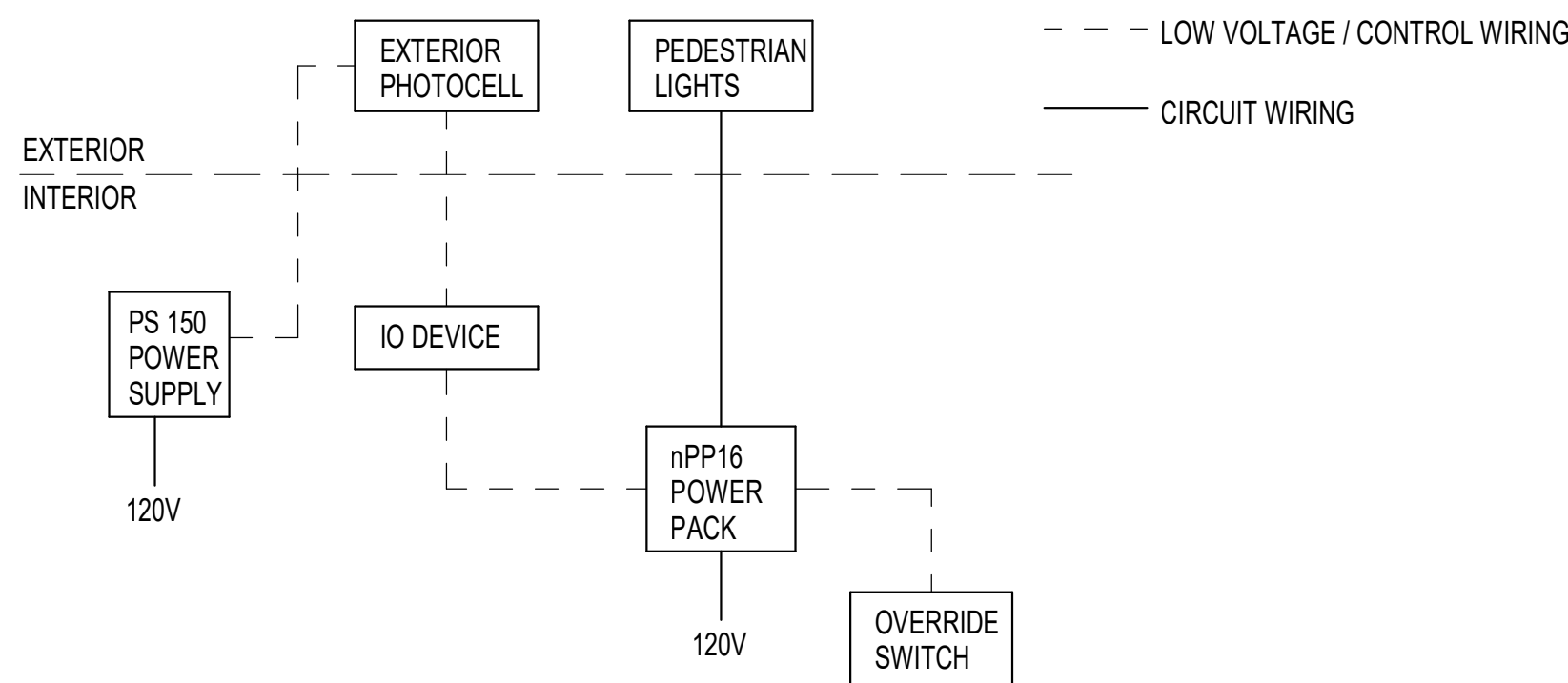
Building ID: NLR	Floor Levels: Site	Section: -
Scale	As indicated	KP Project No. CAP027382
Drawn By	Author	Permit No. -
Chkd By	Checker	Sheet
Issue Date	August 18, 2023	E010
jnj Project No.	202010-07	



1 SITE PLAN - ELECTRICAL
1" = 30'-0"



2 ENLARGED SITE PLAN - ELECTRICAL
1" = 20'-0"



GENERAL NOTES:

- MAJOR SYSTEM COMPONENTS ARE SHOWN. COORDINATE WITH MANUFACTURER FOR ADDITIONAL COMPONENTS NEEDED FOR A COMPLETE AND FUNCTIONAL SYSTEM.
- INSTALL SYSTEM PER MANUFACTURER INSTRUCTIONS. CONCEALED WITHIN ACCESS CEILING SPACE WHERE POSSIBLE.
- LOCATE LOW-VOLTAGE OVERRIDE SWITCH IN ENGINEER SHOP ADJACENT TO EXISTING EXHAUST FAN SWITCH AND NEW POLE RECEPTACLE TOGGLE SWITCH.

3 LIGHTING CONTROL BLOCK DIAGRAM
1/8" = 1'-0"