



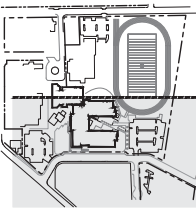
1233 NW Northrup Street  
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NORTH CLACKAMAS SCHOOL DISTRICT  
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revisions

phase	LAND USE SET
date	03/11/2019
project	17010

EXISTING CONDITIONS

C100

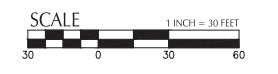
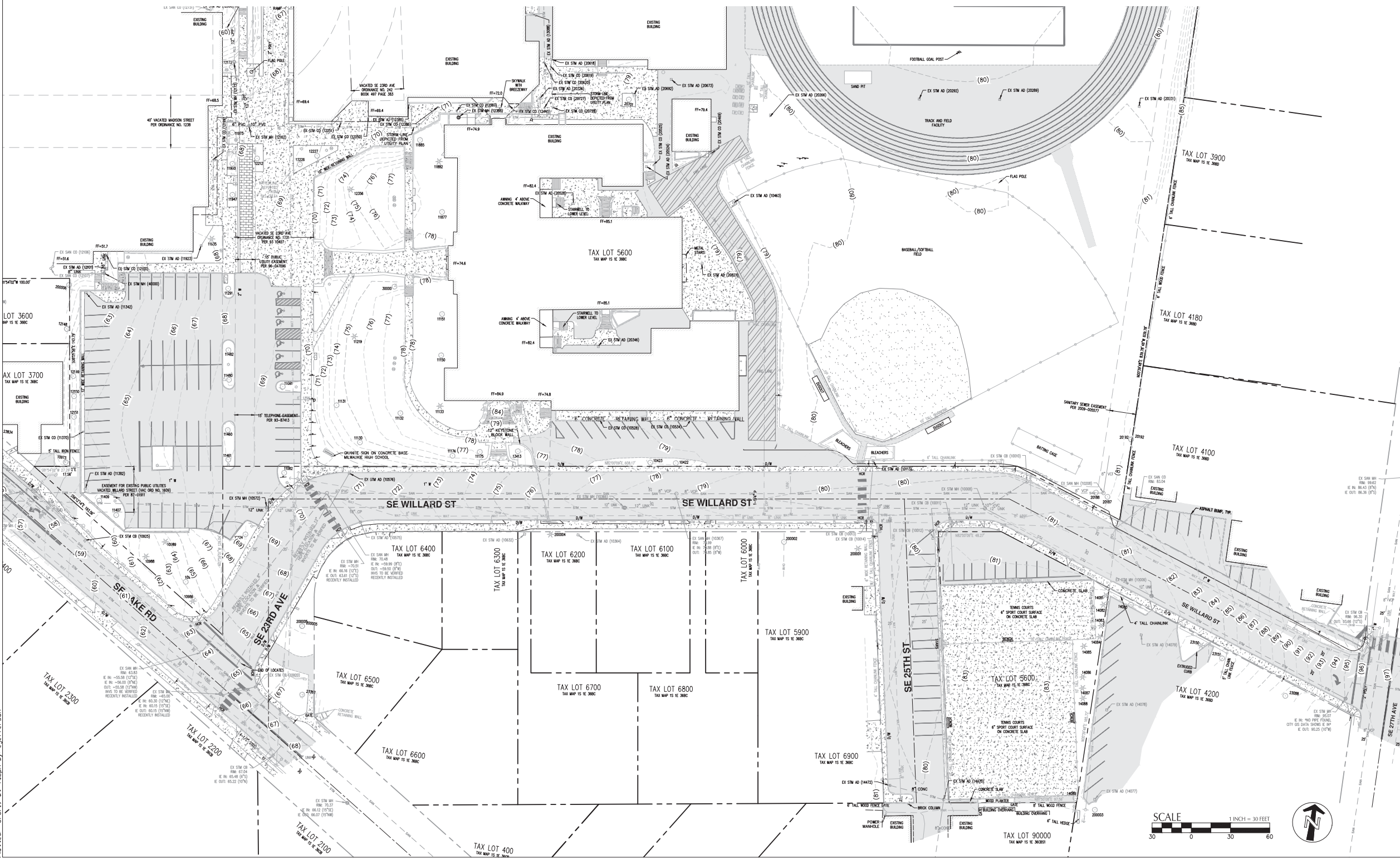
**NOTES:**

- UTILITIES SHOWN ARE BASED ON UNDERGROUND UTILITY LOCATE MARKINGS AS PROVIDED BY OTHERS, PROVIDED PER UTILITY LOCATE TICKET NUMBER 17005064, 1808844, 1808850, 18072616, AND 1807264. 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 MARCH 8-22, APRIL 10 & 14, AUGUST 14-18 2017, AND APRIL 9-12, APRIL 30-31 & MARCH 1, 2018.
- VERTICAL DATUM ELEVATIONS ARE NAVD88 DERIVED FROM THE TRIMBLE VRS NOW NETWORK. NETWORK ELEVATIONS WERE CHECKED AGAINST PUBLISHED DATASHEET ELEVATIONS AT NGS BENCHMARK NO. R01487, R01488, AND R01491.
- THIS MAP DOES NOT CONSTITUTE A PROPERTY BOUNDARY SURVEY.
- SURVEY IS ONLY VALID WITH SURVEYOR'S STAMP AND SIGNATURE.
- BUILDING FOOTPRINTS ARE MEASURED TO SIDING UNLESS NOTED OTHERWISE. CONTACT SURVEYOR WITH QUESTIONS REGARDING BUILDING TIES.
- CONTOUR INTERVAL IS 1 FOOT.
- 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.
- HORIZONTAL DATUM: LOCAL DATUM PLANE SCALED FROM OREGON STATE PLANE NORTH 3601, NAD83(2011) EPOCH 2010.0000, BY HOLDING A PROJECT MEAN GROUND COMBINED SCALE FACTOR OF 1.0000945532 AT A CALCULATED CENTRAL PROJECT POINT WITH GRID VALUES OF (NORTH 654950.01, EAST 7854523.35). THE MERIDIAN CONVERGENCE ANGLE AT THE CALCULATED CENTRAL POINT IS -130748". THE STATE PLANE COORDINATES WERE DERIVED FROM THE TRIMBLE VRS NOW NETWORK WITH HORIZONTAL POSITION CHECKED AGAINST PUBLISHED DATASHEET COORDINATES AT NGS CONTROL POINT PID R01491.

- CITY OF MILWAUKIE ORDINANCE NUMBER 242, BOOK 497 PAGE 383 IS BLANKET IN NATURE AND COVERS 23RD STREET 500 FEET FROM WASHINGTON ST. AND WILLARD ST. FROM LAKE ROAD EASTERLY TO HENNINGMAN ACRES.
- EASEMENTS FOR EXISTING PUBLIC UTILITIES IN VACATED STREET AREAS AND THE CONDITIONS IMPOSED THEREBY, BOOK 181 PAGE 94 DOES NOT DESCRIBE ANY UTILITIES OR EASEMENTS.

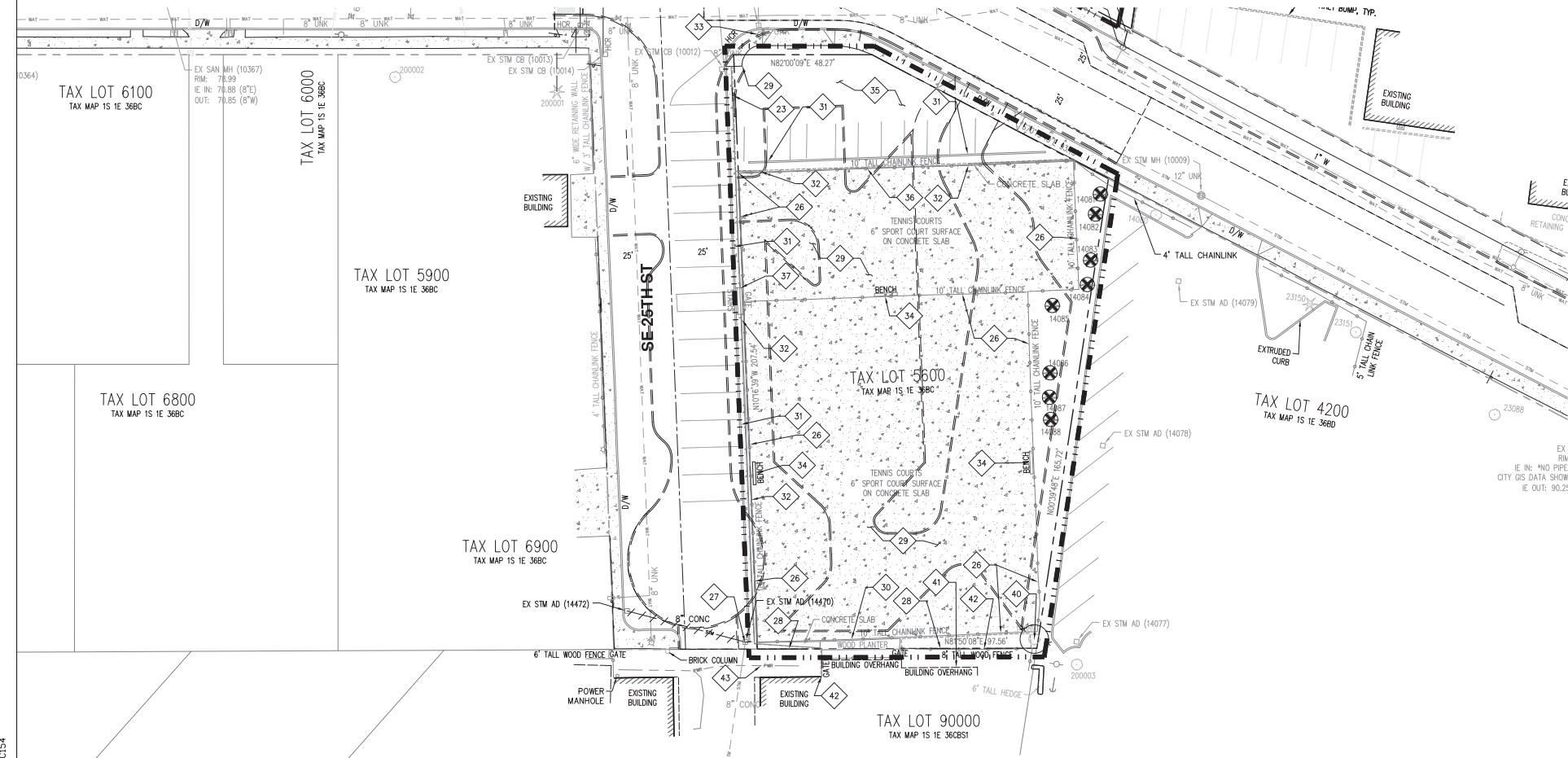
LEGEND

<p>EXISTING</p> <p>DECIDUOUS TREE</p> <p>CONIFEROUS TREE</p> <p>FIRE HYDRANT</p> <p>WATER METER</p> <p>WATER VALVE</p> <p>SANITARY SEWER CLEAN OUT</p> <p>SANITARY SEWER MANHOLE</p>	<p>STORM SEWER CLEAN OUT</p> <p>STORM SEWER CATCH BASIN</p> <p>STORM SEWER AREA DRAIN</p> <p>STORM SEWER MANHOLE</p> <p>GAS METER</p> <p>GAS VALVE</p> <p>SIGN</p> <p>STREET LIGHT</p>	<p>EXISTING</p> <p>GUY WIRE ANCHOR</p> <p>POWER POLE</p> <p>POWER JUNCTION BOX</p> <p>POWER PEDESTAL</p> <p>COMMUNICATIONS JUNCTION BOX</p> <p>COMMUNICATIONS RISER</p> <p>MAILBOX</p>	<p>EXISTING</p> <p>RIGHT-OF-WAY LINE</p> <p>BOUNDARY LINE</p> <p>PROPERTY LINE</p> <p>CENTERLINE</p> <p>CURB</p> <p>EDGE OF PAVEMENT</p> <p>EASEMENT</p> <p>FENCE LINE</p>	<p>EXISTING</p> <p>GRAVEL EDGE</p> <p>POWER LINE</p> <p>OVERHEAD WIRE</p> <p>COMMUNICATIONS LINE</p> <p>FIBER OPTIC LINE</p> <p>GAS LINE</p> <p>STORM SEWER LINE</p> <p>SANITARY SEWER LINE</p> <p>WATER LINE</p>
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File: N:\CS\2017\170019-Milwaukie-HS\CAD\PL\LOT\_DD\DD\OUTH+PARKING-L\170019-C100-EKST.dwg TAB: C100  
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File: N:\CS\2017\700019-Milwaukie-HS-CAD\PL\LOT\_1\DD\SDUTH-PARKING-LDT\700019-C150-DEMO.dwg TAB-C154  
 Picked: 3/11/19 at 10:29am By: EHeile



**SHEET NOTES**

- CONTRACTOR MAY STAGE WITHIN LIMITS OF DEMOLITION.
- REMOVE ALL SITE COMPONENTS AND RECYCLE COMPONENTS AS REQUIRED IN THE SPECIFICATIONS.
- GENERAL DEMOLITION PERMIT SHALL BE SECURED BY THE CONTRACTOR.
- ALL TRADE LICENSES AND PERMITS NECESSARY FOR THE PROCUREMENT AND COMPLETION OF THE WORK SHALL BE SECURED BY THE CONTRACTOR PRIOR TO COMMENCING DEMOLITION.
- 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.
- PROTECT ALL ITEMS ON ADJACENT PROPERTIES AND IN THE RIGHT OF WAY INCLUDING BUT NOT LIMITED TO SIGNAL EQUIPMENT, PARKING METERS, SIDEWALKS, STREET TREES, CURBS, PAVEMENT AND SIGNS. CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORING ANY DAMAGED ITEMS TO ORIGINAL CONDITION.
- PROTECT STRUCTURES, UTILITIES, SIDEWALKS, AND OTHER FACILITIES IMMEDIATELY ADJACENT TO EXCAVATIONS FROM DAMAGES CAUSED BY SETTLEMENT, LATERAL MOVEMENT, UNDERMINING, WASHOUT AND OTHER HAZARDS.
- SAWCUT STRAIGHT LINES IN SIDEWALK, AS NECESSARY.
- 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.
- ALL EXPOSED PORTIONS OF UNDERGROUND UTILITIES TO BE ABANDONED SHALL BE PLUGGED.
- DEMOLITION REQUIREMENTS ARE SHOWN DIAGRAMMATICALLY ON THESE DRAWINGS. THE SHEETS MAY NOT SHOW EVERY SITE ELEMENT THAT MAY NEED TO BE REMOVED. CONTRACTOR IS RESPONSIBLE FOR ESTABLISHING THE SCOPE OF DEMOLITION WORK AND FOR EXAMINING EXISTING SITE CONDITIONS.
- SEE C710-C713 OF MILWAUKIE HIGH SCHOOL PERMIT SET FOR DEMOLITION WITHIN THE PUBLIC R.O.W.

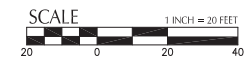
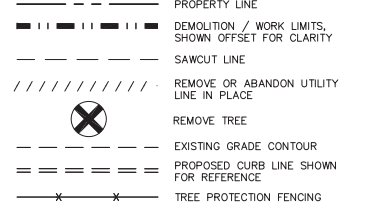
**DEMOLITION KEY NOTES**

- 20 NOT USED
- 21 NOT USED
- 22 NOT USED
- 23 REMOVE EXISTING SIGNS. COORDINATE WITH PROPERTY OWNER.
- 24 NOT USED
- 25 NOT USED
- 26 REMOVE FENCE
- 27 REMOVE AREA DRAIN/CATCH BASIN AND CONNECTED INFRASTRUCTURE
- 28 SAWCUT EXISTING ASPHALT (REFERENCE SITE PLAN FOR EXACT LOCATION).
- 29 REMOVE EXISTING CONCRETE
- 30 REMOVE EXISTING WOODEN PLANTER
- 31 REMOVE EXISTING CURB
- 32 REMOVE EXISTING WALL
- 33 COORDINATE WITH POWER COMPANY TO REMOVE POWER POLE
- 34 REMOVE EXISTING BENCH
- 35 REMOVE EXISTING ASPHALT PAVEMENT
- 36 REMOVE MOVE GATE AND FENCE
- 37 REMOVE EXISTING STAIRS

**PROTECTION KEY NOTES**

- 40 PROTECT TREE
- 41 PROTECT EXISTING BUILDING/STRUCTURE
- 42 PROTECT EXISTING FENCE/GATE
- 43 PROTECT EXISTING UTILITY

**SHEET LEGEND**



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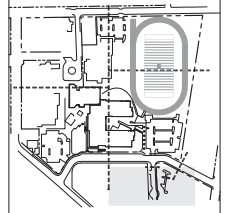
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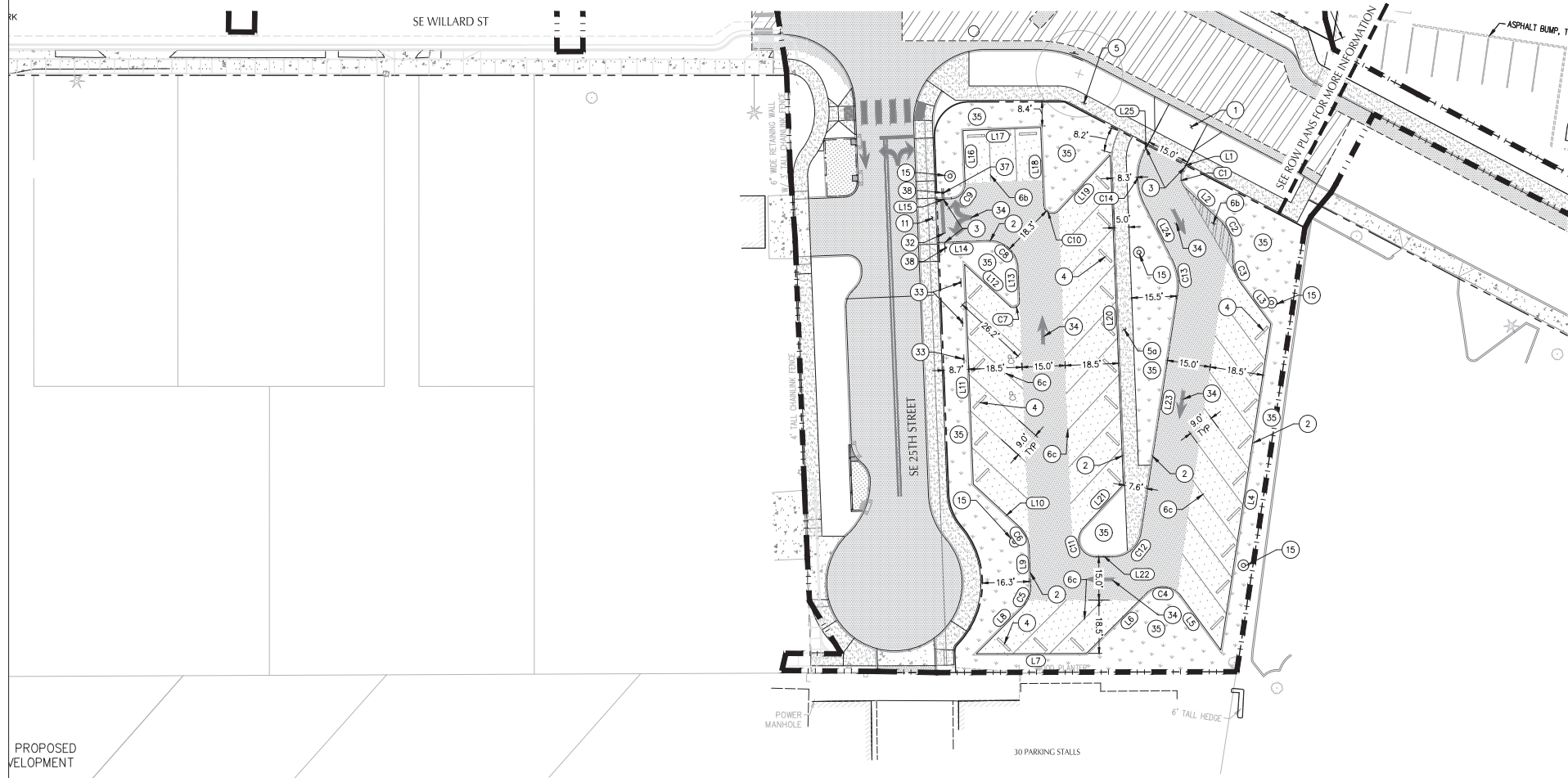
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revisions	
phase	LAND USE SET
date	03/11/2019
project	17010
700019-C150-DEMO - C154	

**C154**

File: N:\CS\2017\70019-Milwaukie-HS-CAD\PLT\DTL\DD\OUTH-PARKING-L01\70019-C200-SITE.dwg TAB:C204  
 Plotted: 3/12/19 at 11:08am by e Jefferson



LINE TABLE		
LINE NO.	LENGTH	DIRECTION
L1	2.74'	S19° 40' 20.00"W
L2	15.97'	S54° 41' 48.24"E
L3	17.28'	S44° 17' 29.89"E
L4	114.55'	S0° 42' 30.11"W
L5	23.25'	N44° 17' 29.89"W
L6	29.42'	S36° 54' 36.97"W
L7	38.23'	S81° 50' 06.00"W
L8	22.68'	N36° 54' 36.97"E
L9	13.47'	N10° 16' 38.73"W
L10	22.02'	N55° 16' 38.73"W
L11	76.37'	N10° 16' 38.73"W
L12	21.33'	S55° 16' 38.73"E
L13	11.65'	N10° 16' 38.73"W
L14	17.73'	S79° 43' 21.00"W
L15	5.50'	S79° 43' 21.00"W
L16	18.51'	S10° 16' 38.73"E
L17	27.00'	S79° 43' 21.27"W
L18	27.02'	N10° 16' 38.73"W
L19	26.32'	S34° 43' 21.27"W
L20	114.55'	N10° 16' 38.73"W

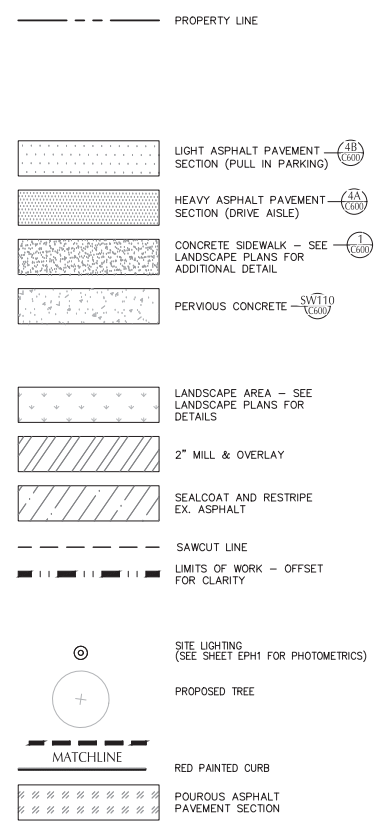
LINE TABLE		
LINE NO.	LENGTH	DIRECTION
L21	20.44'	N34° 43' 21.27"E
L22	5.78'	S81° 50' 08.00"W
L23	83.58'	S0° 42' 30.11"W
L24	21.53'	S34° 43' 56.24"E
L25	2.74'	S19° 40' 20.00"W

CURVE DATA TABLE			
CURVE NO.	LENGTH	RADIUS	DELTA
C1	6.89'	5.00'	78°56'39"
C2	12.83'	14.50'	50°40'46"
C3	11.03'	15.50'	40°45'53"
C4	13.79'	8.00'	98°47'53"
C5	8.24'	10.00'	47°11'16"
C6	7.85'	10.00'	45°00'00"
C7	4.71'	2.00'	135°00'00"
C8	15.71'	10.00'	90°00'00"
C9	7.85'	5.00'	90°00'00"
C10	7.07'	3.00'	135°00'00"
C11	13.92'	6.00'	132°53'13"
C12	14.16'	10.00'	81°07'38"
C13	12.68'	20.50'	35°26'26"
C14	18.99'	20.00'	54°24'16"

**SHEET NOTES**

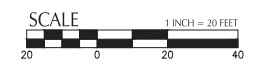
- ALL DIMENSIONS ARE TO FACE OF CURB OR FACE OF WALL (UNLESS OTHERWISE NOTED).
- SEE LANDSCAPE PLANS FOR PLANTING AND ADDITIONAL SITE FEATURES.
- SEE LANDSCAPE PLANS FOR ALL PEDESTRIAN HARDSCAPE ON THE LANDSCAPE ARCHITECT SIDE OF THE REFERENCE LINE INCLUDING CONCRETE SCORING AND JOINT LOCATIONS.
- SEE ARCHITECTURAL PLANS FOR ADDITIONAL DIMENSIONS AND LAYOUT.
- SEE LANDSCAPE PLANS FOR ALL FENCING HANDRAILS AND GATES.
- SEE MILWAUKIE HIGH SCHOOL SHEETS C700-C802 FOR PROPOSED FRONTAGE IMPROVEMENTS IN RIGHT-OF-WAY. TO BE PERMITTED UNDER SEPARATE PERMIT.

**SHEET LEGEND**



**KEY NOTES**

- | #  | DESCRIPTION                                     |
|----|---|
| 1  | SETBACK DRIVEWAY APPROACH                       |
| 2  | STANDARD CURB                                   |
| 3  | CURB ENDING TAPER TO FLUSH                      |
| 4  | WHEEL STOP                                      |
| 5  | CONCRETE SIDEWALK                               |
| 5a | PERVIOUS CONCRETE SIDEWALK                      |
| 6b | "NO PARKING" ZONE STRIPING                      |
| 6c | 4" PARKING STRIPING, TYPICAL                    |
| 8  | DETECTABLE WARNING                              |
| 9  | CURB RAMP                                       |
| 10 | CAST-IN-PLACE CONCRETE WALL                     |
| 11 | FLUSH CONCRETE CROSSING/DRIVEWAY APRON          |
| 14 | ACCESSIBLE CROSSWALK                            |
| 15 | SITE LIGHTING - SEE SHEET EPH1 FOR PHOTOMETRICS |
| 20 | HEIGHTENED CURB (MAX 18")                       |
| 32 | PROVIDE STOP BAR                                |
| 33 | CARPOOL PARKING SIGN                            |
| 34 | PROVIDE DIRECTIONAL ARROWS                      |
| 35 | SEE LANDSCAPE PLANS FOR PLANTING INFORMATION    |
| 37 | STOP SIGN                                       |
| 38 | DO NOT ENTER SIGN                               |



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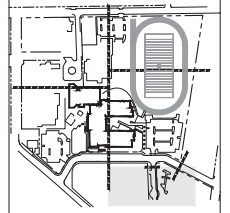
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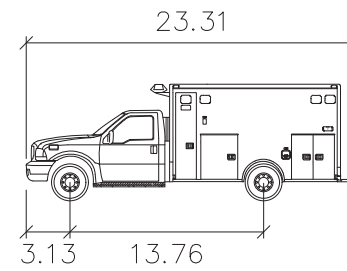
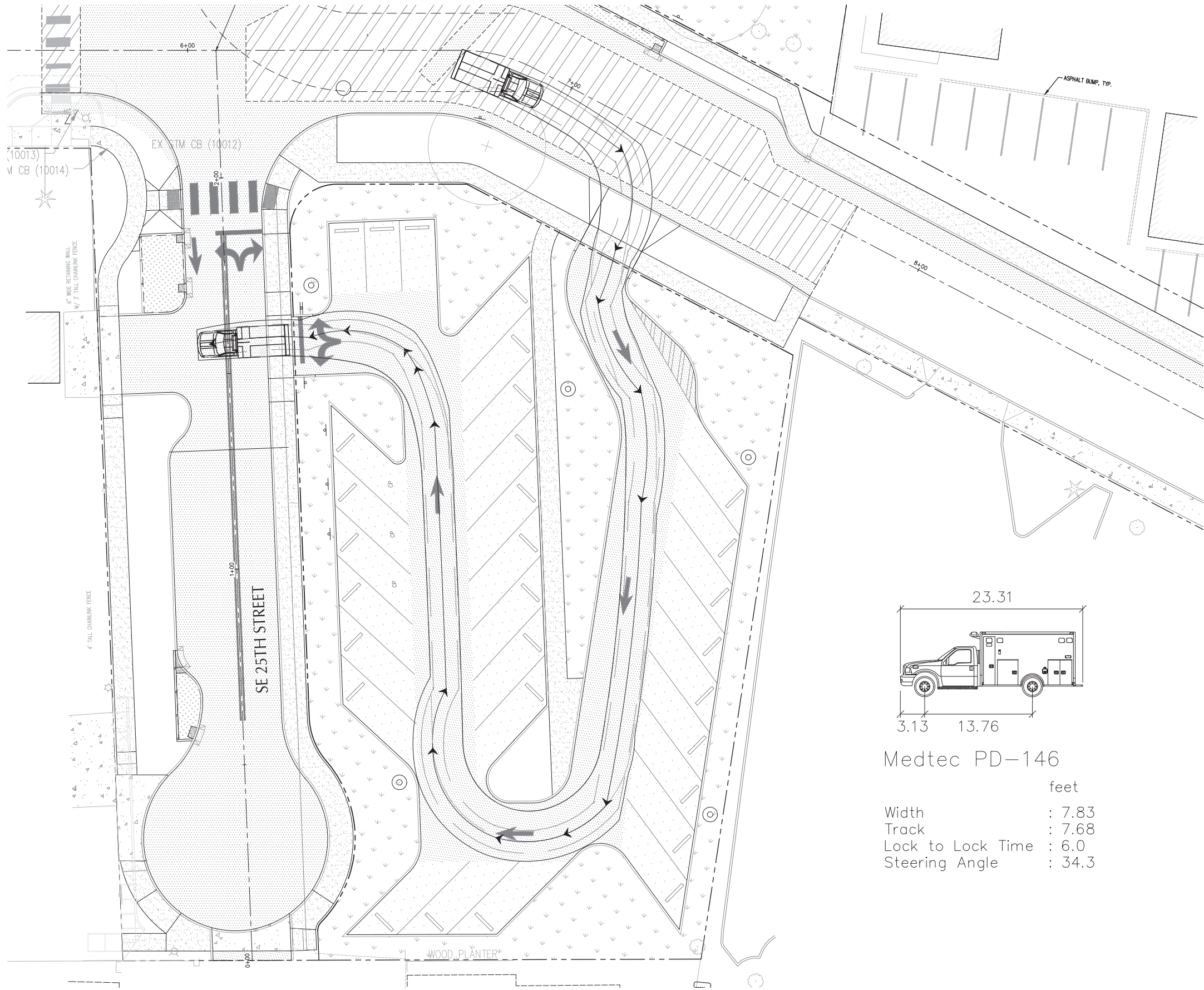


revisions	

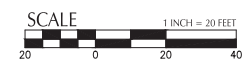
phase	LAND USE SET
date	03/11/2019
project	17010
SITE AND HORIZONTAL CONTROL PLANS	
<b>C204</b>	

File: N:\S\2017\700019-Milwaukie-HS-CAD\PLDT\DD\SO\TH-PARKING-LDT\700019-C215-AUTO-TURN.dwg TAB: C215  
 Plotted: 3/12/19 at 12:20pm By: Jefferson



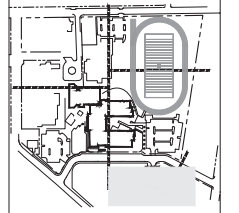
Medtec PD-146

	feet
Width	: 7.83
Track	: 7.68
Lock to Lock Time	: 6.0
Steering Angle	: 34.3



**MILWAUKIE HIGH SCHOOL**

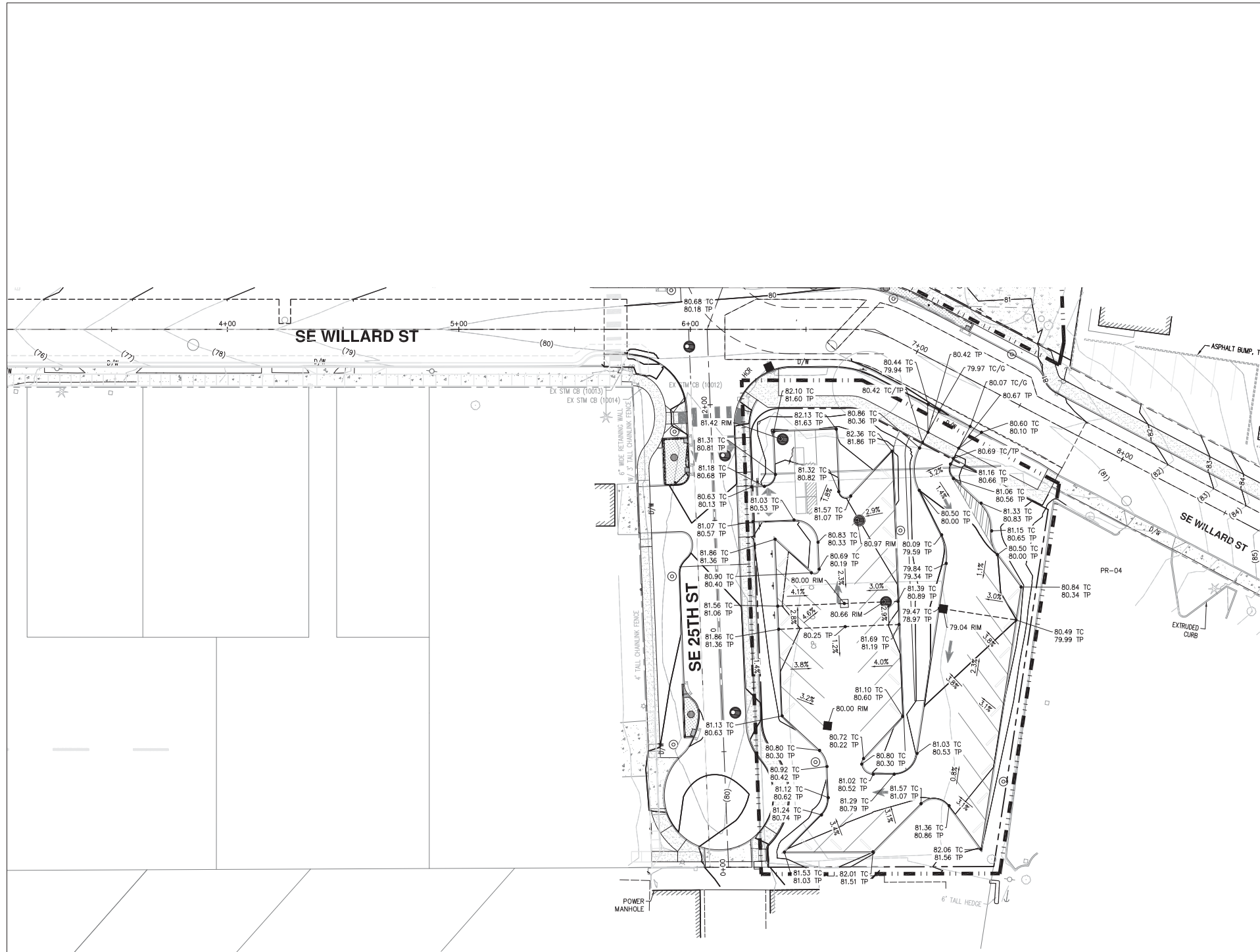
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key plan

revisions	
phase	LAND USE SET
date	03/11/2019
project	17010
CIRCULATION PLAN	

File: N:\CS\9\2017\1700019-Milwaukie-HS\CADD\PLDT\DD\SDUTH-PARKING-LDT\700019-C300-GRADING.dwg TAB: C304  
 Plotted: 3/11/19 at 4:08pm By: Ekhle



**SHEET NOTES**

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

**GRADING LABEL LEGEND**

CALLOUT	DESCRIPTION
X.X%	GRADING SLOPE AND DIRECTION (DOWNHILL)
XX.XX	SPOT ELEVATION
XXX.XX XX	DESCRIPTION LISTED BELOW. NO DESCRIPTION MEANS TP OR TG
EG	EXISTING GRADE
FF	FINISHED FLOOR
FG	FINISHED GRADE
RIM	RIM OF STRUCTURE
TC	TOP OF CURB
TP	TOP OF PAVEMENT
(XXX.X±)	EXISTING GRADE (MATCH WHERE APPLICABLE)

**SHEET LEGEND**

	DRAINAGE FLOW DIRECTION
	GRADE BREAK
	EX. CONTOUR MINOR
	EX. CONTOUR MAJOR
	CONTOUR MINOR (FG)
	CONTOUR MAJOR (FG)
	VALLEY GUTTER
	SAWCUT LINE
	WALL
	LIMITS OF WORK

**GRADING NOTES**

- (NOTE: NOT ALL NOTES USED ON THIS PLAN)
1. GRADE TO MAINTAIN POSITIVE DRAINAGE WAY FROM BUILDING.
  2. STRIP TOPSOIL AND PROVIDE EXCAVATION OR FILL AS NEEDED TO ACHIEVE SUBGRADE ELEVATION. PROVIDE STRUCTURAL FILL AS SPECIFIED UNDER BUILDING AND PAVEMENT, TYPICAL.
  3. MATCH PAVEMENT GRADES AT DRIVEWAYS.
  4. NOTE: PROVIDE 6" COMPACTED LAYER BUILDING SUBFLOOR MATERIAL UNDER BUILDING SLAB, TYPICAL.
  5. MATCH EXISTING GRADES AT SAWCUT LINE.
  6. SEE LANDSCAPE PLANS FOR PEDESTRIAN WALKWAY AND LANDSCAPE GRADES.

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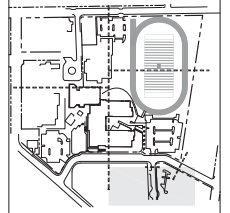
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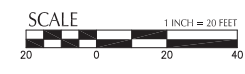
**MILWAUKIE HIGH SCHOOL**

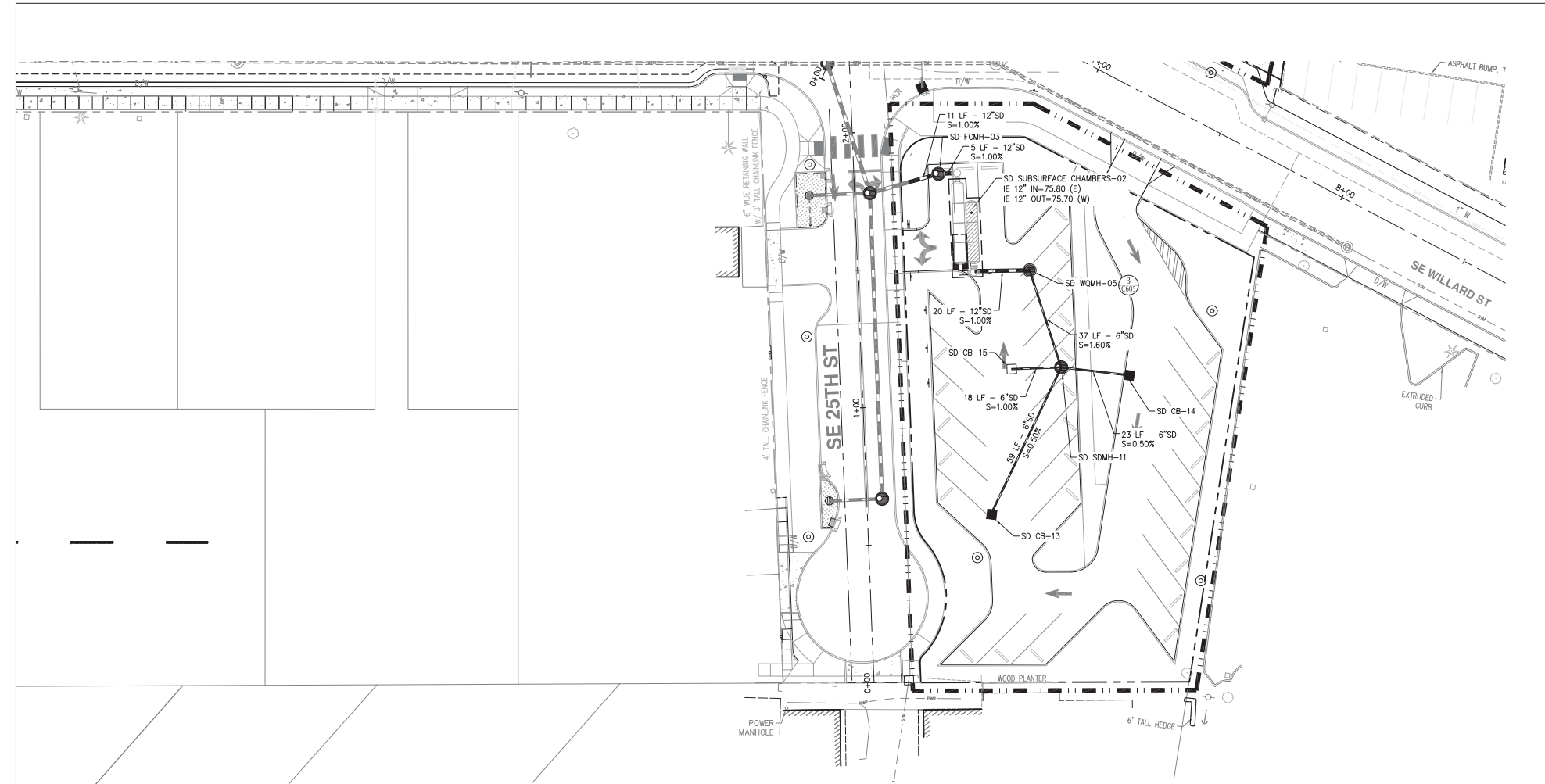
NORTH CLACKAMAS SCHOOL DISTRICT  
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revisions	
phase	LAND USE SET
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project	17010
GRADING PLAN	

**C304**





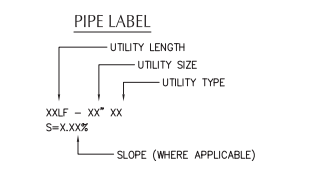
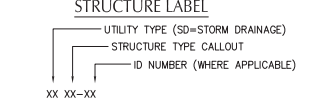
**SHEET NOTES**

- 1. PIPE BEDDING AND BACKFILL FOR ALL ONSITE UTILITIES SHALL BE DONE PER DETAIL.
- 2. STATIONS AND OFFSETS SHOWN ON STRUCTURES ARE SHOWN AT CENTER OF STRUCTURE.
- 3. SEE C402 FOR UTILITY STRUCTURE TABLES INCLUDING LOCATIONS, RIM AND INVERT ELEVATIONS.

**UTILITY KEY NOTES**

- NOTE: DESCRIPTION DETAIL REF.
- SD CONNECT TO STORM DRAIN/ROOF DRAIN. SEE PLUMBING PLANS FOR CONTINUATION. SIZE AND IE AS NOTED.
  - SD SUBSURFACE CHAMBERS

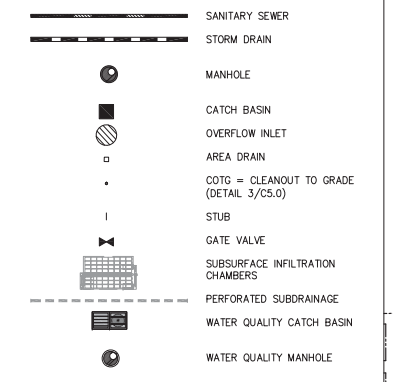
**UTILITY LABEL LEGEND**



**STRUCTURE TYPE**

CALLOUT	DESCRIPTION	DETAIL REF.
AD	AREA DRAIN TYPE 1	5/C602
CB	CATCH BASIN	7/C602
CO	CLEANOUT TO GRADE	2/C602
FD	FOUNDATION DRAINAGE	6/C602
SDMH	STORM MANHOLE	3/C602
OV	OVERFLOW INLET	1/C603
SDMH	SEDIMENTATION MANHOLE	2/C603
STUB	STUB	
WQM	WATER QUALITY MANHOLE (3 CARTRIDGE)	8/C602
WQCB	WATER QUALITY CATCH BASIN	1/C605
FCMH	FLOW CONTROL MANHOLE	4/C603
WYE	WYE CONNECTION	
TEE	TEE CONNECTION	

**LEGEND**



**SD STRUCTURE TABLE**

STRUCTURE ID	NORTHING	EASTING	RIM ELEVATION	INVERT ELEVATIONS
CB-13	653860.32	7653916.57	80.05	IE 6" OUT=78.49 (N)
CB-14	653917.33	7653959.04	79.82	IE 6" OUT=78.32 (W)
CB-15	653913.66	7653918.09	80.00	IE 6" OUT=78.38 (E)
FCMH-03	653980.22	7653881.86	81.39	IE 12" IN=75.65 (E) IE 12" OUT=75.27 (SW)
SDMH-11	653916.78	7653935.82	80.69	IE 6" IN=78.20 (W) IE 6" IN=78.20 (E) IE 6" IN=78.20 (S) IE 6" OUT=78.10 (NW)
SUBSURFACE CHAMBERS-01	654010.07	7653250.55	63.00	IE 12" IN=58.34 (E) IE 12" OUT=58.34 (S)
WQM-05	653950.08	7653919.54	81.00	IE 6" IN=77.51 (SE) IE 12" OUT=76.00 (W)

**BRIC**  
ARCHITECTURE, INC.

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Suite 100  
Portland, Oregon 97209  
tel. (503) 595 4900



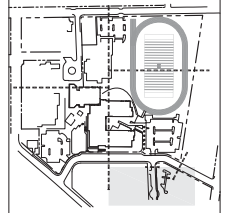
**kpff**

111 SW Fifth Ave., Suite 2400  
Portland, OR 97204  
O: 503.227.3251  
F: 503.274.4681  
www.kpff.com



**MILWAUKIE HIGH SCHOOL**

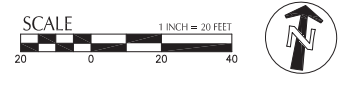
NORTH CLACKAMAS SCHOOL DISTRICT  
2301 SE Willard Street, Milwaukie, OR 97222  
t: (503) 353-5830  
f: (503) 353-5846



**key plan**

revisions	phase	LAND USE SET
	date	03/11/2019
	project	17010
		STORM DRAINAGE PLAN

**C402**



File: N:\CS\2017\00019-Milwaukie-HS\CADD\PLDT\DD\SD\TH-PARKING-LDT\700019-C400-SDRM.dwg TAB-C-02  
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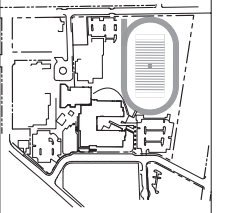


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revisions	
phase	100% CD - IFC - PERMIT SET
date	11/26/2018
project	171010

ONSITE DETAILS

**C605**

**STORMFILTER DESIGN NOTES**

STORMFILTER TREATMENT CAPACITY IS A FUNCTION OF THE CARTRIDGE SELECTION AND THE NUMBER OF CARTRIDGES. THE STANDARD MANHOLE STYLE IS SHOWN WITH THE MAXIMUM NUMBER OF CARTRIDGES (16). VOLUME SYSTEM IS ALSO AVAILABLE WITH MAXIMUM 4 CARTRIDGES. STORMFILTER PEAK HYDRAULIC CAPACITY IS 12 CFS. IF THE SITE CONDITIONS EXCEED 12 CFS AN UPSTREAM BYPASS STRUCTURE IS REQUIRED.

CARTRIDGE SELECTION	16"
CARTRIDGE HEIGHT	2.7"
RECOMMENDED HYDRAULIC DROP (IN)	2.0"
DESIGN FLOW RATE (gpm)	2.0"
CARTRIDGE FLOW RATE (gpm)	2.0"

**SITE SPECIFIC DATA REQUIREMENTS**

STRUCTURE ID	WQMH-01
WATER QUALITY FLOW RATE (cfs)	1.53
PEAK FLOW RATE (cfs)	2.31
DESIGN VOLUME OF FLOW (cfs)	2.5
# OF CARTRIDGES REQUIRED	4
CARTRIDGE FLOW RATE (gpm)	18
DESIGN FLOW RATE (gpm)	18
DESIGN FLOW RATE (gpm)	18
DESIGN FLOW RATE (gpm)	18

**GENERAL NOTES**

- CONTRACTOR TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE.
- DIMENSIONS SHOWN WITH 1/8" REFERENCE DIMENSIONS. ACTUAL DIMENSIONS MAY VARY.
- FOR SITE SPECIFIC DRAWINGS WITH DETAILED VALVE DIMENSIONS AND HEIGHTS, PLEASE CONTACT YOUR CONTECH ENGINEERED SOLUTIONS LLC REPRESENTATIVE. www.contech.com
- STORMFILTER WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING.
- STRUCTURE SHALL MEET AASHTO H20-10B LOAD RATING, ASSUMING EARTH COVER OF 0'-0" AND GROUNDWATER ELEVATION AT OR BELOW THE OUTLET PIPE INVERT ELEVATION. NUMBER OF RECORD TO CONFORM ACTUAL GROUNDWATER ELEVATION. CARTRIDGE SHALL MEET AASHTO H20-10B AND BE MET WITH THE CONTECH LOGO.
- IF THE CARTRIDGE IS NOT AVAILABLE, CONTRACTOR SHALL CONTACT THE MANUFACTURER, ADVISE CONTECH, AND AALTERNATE SHALL BE PROVIDED. IF THE MANUFACTURER CONTACT TIME SHALL BE AT LEAST 30 BUSINESS DAYS.
- SPECIFIC FLOW RATE IS EQUAL TO THE FILTER TREATMENT CAPACITY (gpm) DIVIDED BY THE FILTER CONTACT SURFACE AREA (sq ft).

**INSTALLATION NOTES**

- ANY ELEVATION, SLOPE, DEPTH, AND/OR ANTI-VIBRATION PROVISIONS ARE SITE-SPECIFIC DESIGN CONSIDERATIONS AND SHALL BE SPECIFIED BY ENGINEER OF RECORD.
- CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE STORMFILTER STRUCTURE USING CLUTCHES PROVIDED.
- CONTRACTOR TO INSTALL JOINT SEALANT BETWEEN ALL STRUCTURE SECTIONS AND ASSEMBLY STRUCTURE.
- CONTRACTOR TO PROVIDE AND INSTALL CONNECTOR TO THE OUTLET REAR STUB. STORMFILTER EQUIPPED WITH A DUAL DIAMETER HOPE OUTLET REAR STUB AND SAND COLUMN. IF OUTLET PIPE IS LARGER THAN 8 INCHES, CONTRACTOR TO REMOVE THE 8 INCH OUTLET STUB AT MOULD IN CUTLINE, COUPLING BY FIBREGLASS OR EQUAL, AND PROVIDED BY CONTRACTOR.
- CONTRACTOR TO TAKE APPROPRIATE MEASURES TO PROTECT CARTRIDGES FROM CONSTRUCTION-RELATED EROSION RUNOFF.

**CONTECH ENGINEERED SOLUTIONS LLC**  
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**SFMH60**  
STORMFILTER  
STANDARD DETAIL

1 WATER QUALITY STORM FILTER MANHOLE WQMH-01  
SCALE: NTS

**STORMFILTER DESIGN NOTES**

STORMFILTER TREATMENT CAPACITY IS A FUNCTION OF THE CARTRIDGE SELECTION AND THE NUMBER OF CARTRIDGES. THE STANDARD MANHOLE STYLE IS SHOWN WITH THE MAXIMUM NUMBER OF CARTRIDGES (16). VOLUME SYSTEM IS ALSO AVAILABLE WITH MAXIMUM 4 CARTRIDGES. STORMFILTER PEAK HYDRAULIC CAPACITY IS 12 CFS. IF THE SITE CONDITIONS EXCEED 12 CFS AN UPSTREAM BYPASS STRUCTURE IS REQUIRED.

CARTRIDGE SELECTION	16"
CARTRIDGE HEIGHT	2.7"
RECOMMENDED HYDRAULIC DROP (IN)	2.0"
DESIGN FLOW RATE (gpm)	2.0"
CARTRIDGE FLOW RATE (gpm)	2.0"

**SITE SPECIFIC DATA REQUIREMENTS**

STRUCTURE ID	WQMH-04
WATER QUALITY FLOW RATE (cfs)	0.98
PEAK FLOW RATE (cfs)	1.48
DESIGN VOLUME OF FLOW (cfs)	2.0
# OF CARTRIDGES REQUIRED	3
CARTRIDGE FLOW RATE (gpm)	13
DESIGN FLOW RATE (gpm)	13
DESIGN FLOW RATE (gpm)	13
DESIGN FLOW RATE (gpm)	13

**GENERAL NOTES**

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- STORMFILTER WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING.
- STRUCTURE SHALL MEET AASHTO H20-10B LOAD RATING, ASSUMING EARTH COVER OF 0'-0" AND GROUNDWATER ELEVATION AT OR BELOW THE OUTLET PIPE INVERT ELEVATION. NUMBER OF RECORD TO CONFORM ACTUAL GROUNDWATER ELEVATION. CARTRIDGE SHALL MEET AASHTO H20-10B AND BE MET WITH THE CONTECH LOGO.
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- SPECIFIC FLOW RATE IS EQUAL TO THE FILTER TREATMENT CAPACITY (gpm) DIVIDED BY THE FILTER CONTACT SURFACE AREA (sq ft).

**INSTALLATION NOTES**

- ANY ELEVATION, SLOPE, DEPTH, AND/OR ANTI-VIBRATION PROVISIONS ARE SITE-SPECIFIC DESIGN CONSIDERATIONS AND SHALL BE SPECIFIED BY ENGINEER OF RECORD.
- CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE STORMFILTER STRUCTURE USING CLUTCHES PROVIDED.
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- CONTRACTOR TO TAKE APPROPRIATE MEASURES TO PROTECT CARTRIDGES FROM CONSTRUCTION-RELATED EROSION RUNOFF.

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PH: 513.333.3333 FAX: 513.333.3333

**SFMH48**  
STORMFILTER  
STANDARD DETAIL

3 WATER QUALITY FILTER MANHOLE WQMH-05  
SCALE: NTS

**STORMFILTER DESIGN NOTES**

STORMFILTER TREATMENT CAPACITY IS A FUNCTION OF THE CARTRIDGE SELECTION AND THE NUMBER OF CARTRIDGES. THE STANDARD MANHOLE STYLE IS SHOWN WITH THE MAXIMUM NUMBER OF CARTRIDGES (16). VOLUME SYSTEM IS ALSO AVAILABLE WITH MAXIMUM 4 CARTRIDGES. STORMFILTER PEAK HYDRAULIC CAPACITY IS 12 CFS. IF THE SITE CONDITIONS EXCEED 12 CFS AN UPSTREAM BYPASS STRUCTURE IS REQUIRED.

CARTRIDGE SELECTION	16"
CARTRIDGE HEIGHT	2.7"
RECOMMENDED HYDRAULIC DROP (IN)	2.0"
DESIGN FLOW RATE (gpm)	2.0"
CARTRIDGE FLOW RATE (gpm)	2.0"

**SITE SPECIFIC DATA REQUIREMENTS**

STRUCTURE ID	WQMH-03
WATER QUALITY FLOW RATE (cfs)	1.53
PEAK FLOW RATE (cfs)	2.31
DESIGN VOLUME OF FLOW (cfs)	2.5
# OF CARTRIDGES REQUIRED	4
CARTRIDGE FLOW RATE (gpm)	18
DESIGN FLOW RATE (gpm)	18
DESIGN FLOW RATE (gpm)	18
DESIGN FLOW RATE (gpm)	18

**GENERAL NOTES**

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- STORMFILTER WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING.
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- IF THE CARTRIDGE IS NOT AVAILABLE, CONTRACTOR SHALL CONTACT THE MANUFACTURER, ADVISE CONTECH, AND AALTERNATE SHALL BE PROVIDED. IF THE MANUFACTURER CONTACT TIME SHALL BE AT LEAST 30 BUSINESS DAYS.
- SPECIFIC FLOW RATE IS EQUAL TO THE FILTER TREATMENT CAPACITY (gpm) DIVIDED BY THE FILTER CONTACT SURFACE AREA (sq ft).

**INSTALLATION NOTES**

- ANY ELEVATION, SLOPE, DEPTH, AND/OR ANTI-VIBRATION PROVISIONS ARE SITE-SPECIFIC DESIGN CONSIDERATIONS AND SHALL BE SPECIFIED BY ENGINEER OF RECORD.
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- CONTRACTOR TO PROVIDE AND INSTALL CONNECTOR TO THE OUTLET REAR STUB. STORMFILTER EQUIPPED WITH A DUAL DIAMETER HOPE OUTLET REAR STUB AND SAND COLUMN. IF OUTLET PIPE IS LARGER THAN 8 INCHES, CONTRACTOR TO REMOVE THE 8 INCH OUTLET STUB AT MOULD IN CUTLINE, COUPLING BY FIBREGLASS OR EQUAL, AND PROVIDED BY CONTRACTOR.
- CONTRACTOR TO TAKE APPROPRIATE MEASURES TO PROTECT CARTRIDGES FROM CONSTRUCTION-RELATED EROSION RUNOFF.

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**SFMH72**  
STORMFILTER  
STANDARD DETAIL

2 WATER QUALITY FILTER MANHOLE WQMH-03  
SCALE: NTS

**STORMFILTER CATCHBASIN DESIGN NOTES**

STORMFILTER TREATMENT CAPACITY IS A FUNCTION OF THE CARTRIDGE SELECTION AND THE NUMBER OF CARTRIDGES. THE STANDARD MANHOLE STYLE IS SHOWN WITH THE MAXIMUM NUMBER OF CARTRIDGES (16). VOLUME SYSTEM IS ALSO AVAILABLE WITH MAXIMUM 4 CARTRIDGES. STORMFILTER PEAK HYDRAULIC CAPACITY IS 12 CFS. IF THE SITE CONDITIONS EXCEED 12 CFS AN UPSTREAM BYPASS STRUCTURE IS REQUIRED.

CARTRIDGE SELECTION	16"
CARTRIDGE HEIGHT	2.7"
RECOMMENDED HYDRAULIC DROP (IN)	2.0"
DESIGN FLOW RATE (gpm)	2.0"
CARTRIDGE FLOW RATE (gpm)	2.0"

**SITE SPECIFIC DATA REQUIREMENTS**

STRUCTURE ID	1-CARTRIDGE CATCHBASIN
WATER QUALITY FLOW RATE (cfs)	0.98
PEAK FLOW RATE (cfs)	1.48
DESIGN VOLUME OF FLOW (cfs)	2.0
# OF CARTRIDGES REQUIRED	1
CARTRIDGE FLOW RATE (gpm)	13
DESIGN FLOW RATE (gpm)	13
DESIGN FLOW RATE (gpm)	13
DESIGN FLOW RATE (gpm)	13

**GENERAL NOTES**

- CONTRACTOR TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE.
- FOR SITE SPECIFIC DRAWINGS WITH DETAILED VALVE DIMENSIONS AND HEIGHTS, PLEASE CONTACT YOUR CONTECH ENGINEERED SOLUTIONS LLC REPRESENTATIVE. www.contech.com
- STORMFILTER CATCHBASIN WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING.
- INLET SHALL NOT BE LOWER THAN OUTLET. INLET BY APPLICABLE AND OUTLET PIPES TO BE SPECIFIED BY ENGINEER AND PROVIDED BY CONTRACTOR.
- STORMFILTER CATCHBASIN EQUIPPED WITH 4 INCH (APPROXIMATE) LONG STEEL FOR INLET AND OUTLET PIPES. STANDARD OUTLET STUB IS 8 INCHES. MAXIMUM OUTLET STUB IS 18 INCHES IN DIAMETER. CONNECTION TO COLLECTOR PIPING CAN BE MADE USING FIBREGLASS COUPLING BY CONTRACTOR.
- STEEL STRUCTURE TO BE MANUFACTURED OF 1/2 INCH STEEL PLATE. CARTRIDGE SHALL MEET AASHTO H20-10B LOAD RATING. TO MEET H20-10B RATING ON 1/2" STRUCTURE, A CONCRETE COLLAR BE REQUIRED. WHEN REQUIRED, CONCRETE COLLAR WITH QUANTITY (Q) IN REINFORCING BARS TO BE PROVIDED BY CONTRACTOR.
- FILTER CARTRIDGE SHALL BE RECYCLED, FIBREGLASS, WITH AN ACTUATED, LAGAL FLOW, AND SELF-CLEANING. RAINWATER DEPTH SHALL BE 8 INCHES. FILTER MEDIA CONTACT TIME SHALL BE AT LEAST 30 SECONDS.
- SPECIFIC FLOW RATE IS EQUAL TO THE FILTER TREATMENT CAPACITY (gpm) DIVIDED BY THE FILTER CONTACT SURFACE AREA (sq ft).

**INSTALLATION NOTES**

- ANY ELEVATION, SLOPE, DEPTH, AND/OR ANTI-VIBRATION PROVISIONS ARE SITE-SPECIFIC DESIGN CONSIDERATIONS AND SHALL BE SPECIFIED BY ENGINEER OF RECORD.
- CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE CATCHBASIN (LIFTING CLUTCHES PROVIDED).
- CONTRACTOR TO TAKE APPROPRIATE MEASURES TO PROTECT CARTRIDGES FROM CONSTRUCTION-RELATED EROSION RUNOFF.

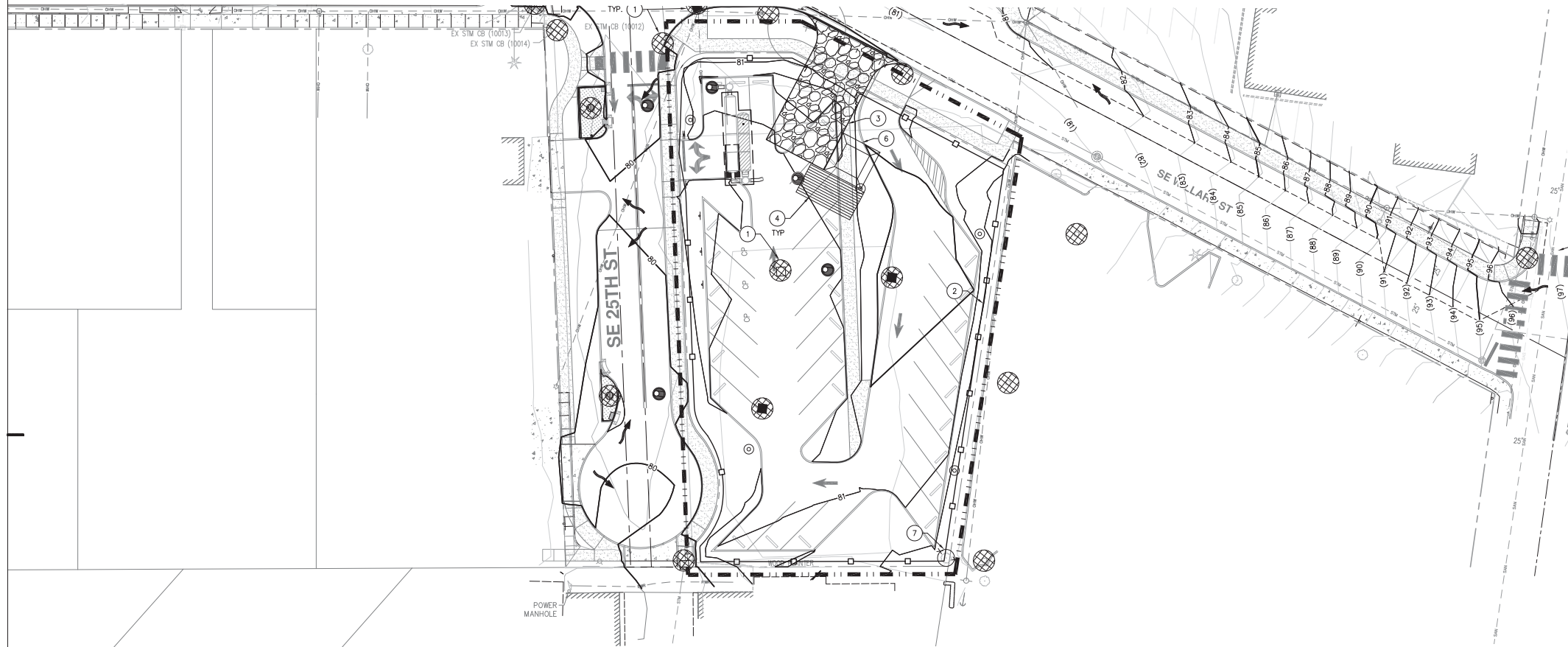
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**1-CARTRIDGE CATCHBASIN**  
STORMFILTER  
STANDARD DETAIL

4 WATER QUALITY FILTER CATCH BASIN CB-04  
SCALE: NTS

File: N:\C\A\2017\100019-Milwaukie-HS-CALV\PLD\CD\700019-C600-DNSTE-DETAILS.dwg TAB C605  
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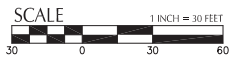
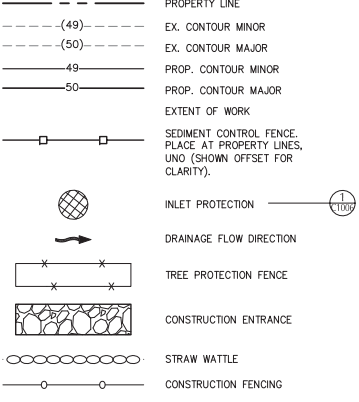
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 Plotted: 3/11/19 at 4:35pm By: Enele



**SHEET NOTES**

- 1 SEE C1000 FOR NOTES.
  - 2 ALL STOCKPILED TOPSOIL MUST BE COVERED DETAIL PER 7/C1006.
  - 3 CONTRACTOR TO INSTALL AND MOVE CONSTRUCTION FENCING AS PROJECT PHASING REQUIRES.
- (X) **KEY NOTES**
- 1 INLET PROTECTION BARRIER OVER EXISTING CATCH BASIN OR AREA DRAIN
  - 2 SEDIMENT FENCE
  - 3 CONSTRUCTION ENTRANCE
  - 4 TIRE WASH
  - 5 STRAW WATTLE
  - 6 CONCRETE WASHOUT
  - 7 TREE PROTECTION FENCE
  - 8 INSTALL GEOTEXTILE FABRIC UNDER COMMERCIAL CONSTRUCTION ENTRANCE PER DETAIL 4/C1006.
  - 9 CONSTRUCTION FENCING

**SHEET LEGEND**



**BRIC**  
 ARCHITECTURE, INC.

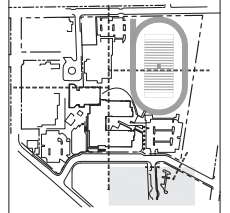
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key plan

revisions	---

phase	LAND USE SET
date	03/11/2019
project	17010

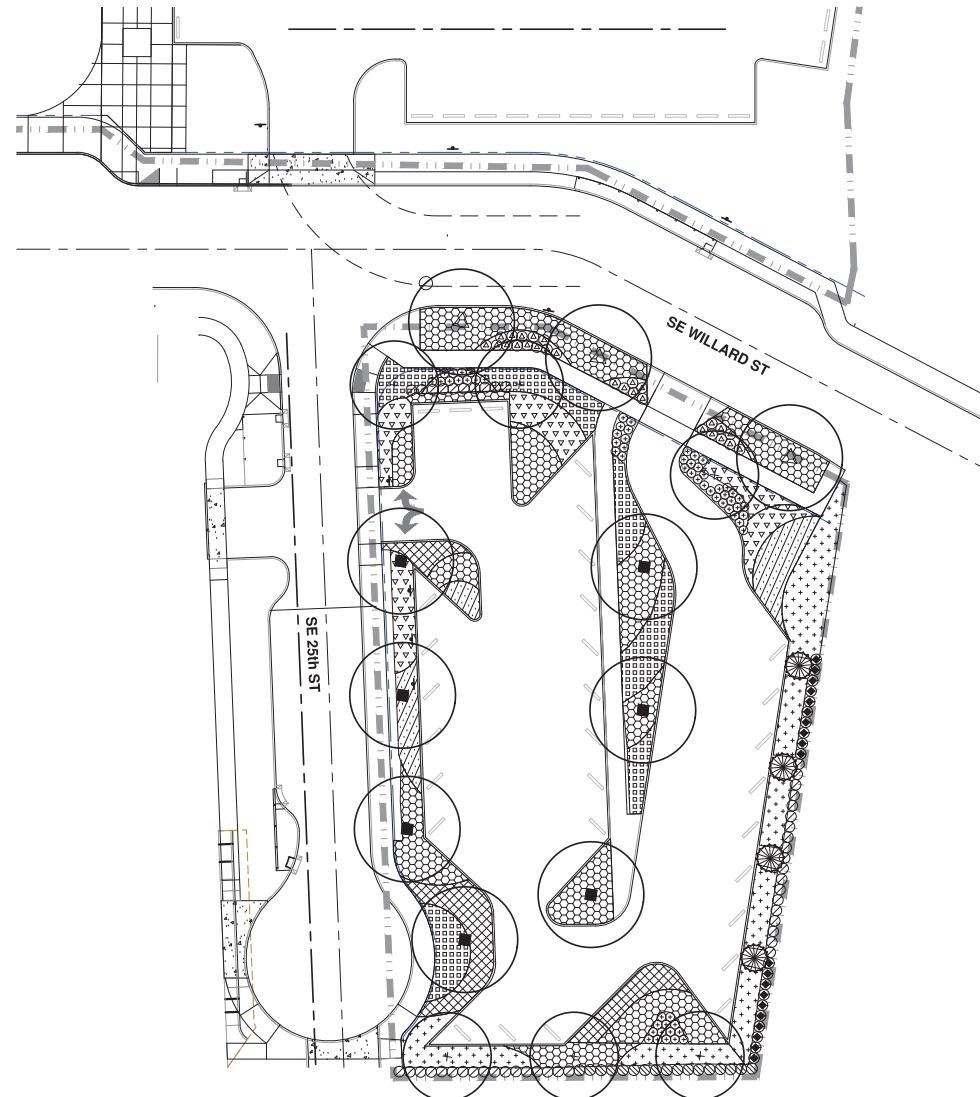
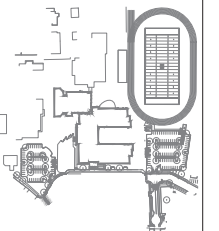
EROSION & SEDIMENT CONTROL PLAN  
**C1005**





**MILWAUKIE HIGH SCHOOL**

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**PLANT SCHEDULE**

**TREES**

- 6 Prunus x yedoensis 'Akebono' - Akebono Cherry  
2" CALIBER, WELL BRANCHED, LIMBED TO 6'
- 7 Crataegus bitorquata - Saratoga Quince  
2" CALIBER, WELL BRANCHED, LIMBED TO 6'
- 3 Quercus kelloggii - American Yellowwood  
2" CALIBER, WELL BRANCHED, LIMBED TO 6'
- 4 Chamaecyparis obtusa 'Gracilis' - Hinoki Cypress  
6" HT, 3/8" DBH, WELL BRANCHED

**SHRUBS**

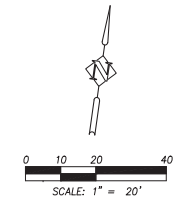
- 62 Cornus sericea 'Kelsay' - Kelsey Dogwood  
1 GAL CONT., FULL PLANTS, SPACING AS SHOWN
- 17 Daphne x barkwoodii 'Carol Mackie' - Carol Mackie Daphne  
2 GAL CONT., FULL PLANTS, SPACING AS SHOWN
- 27 Escallonia x 'Newport Dwarf' - Compact Red Escallonia  
1 GAL CONT., FULL PLANTS, SPACING AS SHOWN
- 46 Viburnum davidii - David Viburnum  
1 GAL CONT., FULL PLANTS, SPACING AS SHOWN
- 28 Choisya ternata - Mexican Orange  
1 GAL CONT., FULL PLANTS, SPACING AS SHOWN
- 20 Nandina domestica 'Tyrone' - Heavenly Bamboo  
5 GAL CONT., FULL PLANTS, SPACING AS SHOWN

**GROUNDCOVER**

- 1,447 Deschampsia cespitosa - Tufted Hair Grass  
1 GAL CONT., FULL PLANTS, 18" O.C.
- 340 Schizanthus scaberrimus 'Standing Ovation' - Little Bluestem  
1 GAL CONT., FULL PLANTS, 24" O.C.
- 626 Festuca glauca 'Elijah Blue' - Elijah Blue Fescue  
1 GAL CONT., FULL PLANTS, 12" O.C.
- 209 Pennisetum alopecuroides 'Hameln' - Fountain Grass  
1 GAL CONT., FULL PLANTS, 24" O.C.
- 157 Helictotrichon sempervirens - Blue Oat Grass  
1 GAL CONT., FULL PLANTS, 30" O.C.
- 442 Mahonia repens - Creeping Oregon Grape  
1 GAL CONT., FULL PLANTS, 24" O.C.

**GENERAL PLANTING NOTES**

1. ALL CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE WITH CURRENT CITY OF MILWAUKIE STANDARDS AND THE OREGON UNIFORM BUILDING CODES.
2. INSTALL EROSION CONTROL SYSTEMS IN ACCORDANCE WITH CITY OF MILWAUKIE STANDARDS PRIOR TO SITE WORK AND LANDSCAPE INSTALLATION.
3. MARK AND PROTECT ALL UTILITIES, SITE FEATURES, AND VEGETATION TO REMAIN IN PLACE.
4. REMOVE EXISTING TOP SOILS AND STOCKPILE PER SPECIFICATIONS. AMEND TOP SOILS IN ACCORDANCE WITH LANDSCAPE PLANS AND SPECIFICATIONS PRIOR TO PLACEMENT IN PLANTING AREAS.
5. LANDSCAPE INSTALLATION SHALL INCLUDE PROVISION OF AN AUTOMATIC IRRIGATION SYSTEM DESIGNED TO COMPLIMENT PLANTING MEETING LOCAL AND STATE BUILDING CODES.
6. PLANT MATERIAL INSTALLED SHALL CONFORM IN SIZE AND GRADE TO THE "AMERICAN STANDARD FOR NURSERY STOCK" CURRENT EDITION.
7. THE QUANTITIES OF PLANT MATERIALS SHALL BE AS DETERMINED BY THE CONTRACTOR IN ACCORDANCE WITH THE SPECIFIED SPACING OR LOCATION ON THE PLAN. MATERIAL QUANTITIES SHOWN ON PLAN ARE FOR CONTRACTOR CONVENIENCE ONLY AND SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO INSTALLATION. SURPLUS OR SHORTAGES OF PLANT QUANTITIES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
8. LANDSCAPE CONTRACTOR SHALL MAINTAIN PLANTINGS FOR THE DURATION OF THE 1 YEAR WARRANTY PERIOD AFTER SUBSTANTIAL COMPLETION AND GUARANTEE ALL PLANTINGS TO BE IN SATISFACTORY AND VIGOROUS HEALTH. PROVIDE MAINTENANCE SCHEDULE PER SPECIFICATIONS.



revisions	
phase	LAND USE
date	SUI MITTAL
project	03/15/2019
	17010
	PLANTING PLAN -
	SOUTH PARKING LOT
	<b>L1.0</b>



**MILWAUKIE HIGH SCHOOL**

NORTH CLACKAMAS SCHOOL DISTRICT  
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LAND USE - SOUTH PARKING LOT LUMINAIRE SCHEDULE										
TYPE	DESCRIPTION	HOUSING	SHIELDING	MOUNTING	FINISH	UL/IPC	DRIVER/POWER	LAMP(S)	INPUT WATTS	MFG/CATALOG #
						RATING	SUPPLY			
SA-2	POST TOP LED AREA LUMINAIRES TO MATCH EXISTING. TYPE II DISTRIBUTION	NOMINAL 18-INCH DIAMETER BY OVERALL HEIGHT OF 32-INCH DIE-CAST ALUMINUM	PRECISION ACRYLIC REFRACTIVE OPTICS	18-FOOT HIGH, STRAIGHT STEEL ROUND POLE. POLE TO WITHSTAND 100 MILE PER HOUR WINDS WITH A GUST FACTOR OF 1.3. ABOVE ROUND CONCRETE PEDESTAL	DARK BRONZE			NOMINAL 6655 LUMENS, 4000K, 80 CRI	75 WATTS	LITHONIA LIGHTING MRP LED SERIES TO MATCH EXISTING
SA-5	POST TOP LED AREA LUMINAIRES TO MATCH EXISTING. TYPE V DISTRIBUTION	NOMINAL 18-INCH DIAMETER BY OVERALL HEIGHT OF 32-INCH DIE-CAST ALUMINUM	PRECISION ACRYLIC REFRACTIVE OPTICS	18-FOOT HIGH, STRAIGHT STEEL ROUND POLE. POLE TO WITHSTAND 100 MILE PER HOUR WINDS WITH A GUST FACTOR OF 1.3. ABOVE ROUND CONCRETE PEDESTAL	DARK BRONZE			NOMINAL 6655 LUMENS, 4000K, 80 CRI	75 WATTS	LITHONIA LIGHTING MRP LED SERIES TO MATCH EXISTING

TYPE SA & EXISTING

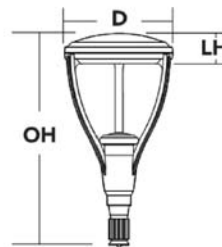


**MRP LED**  
LED Area Luminaire

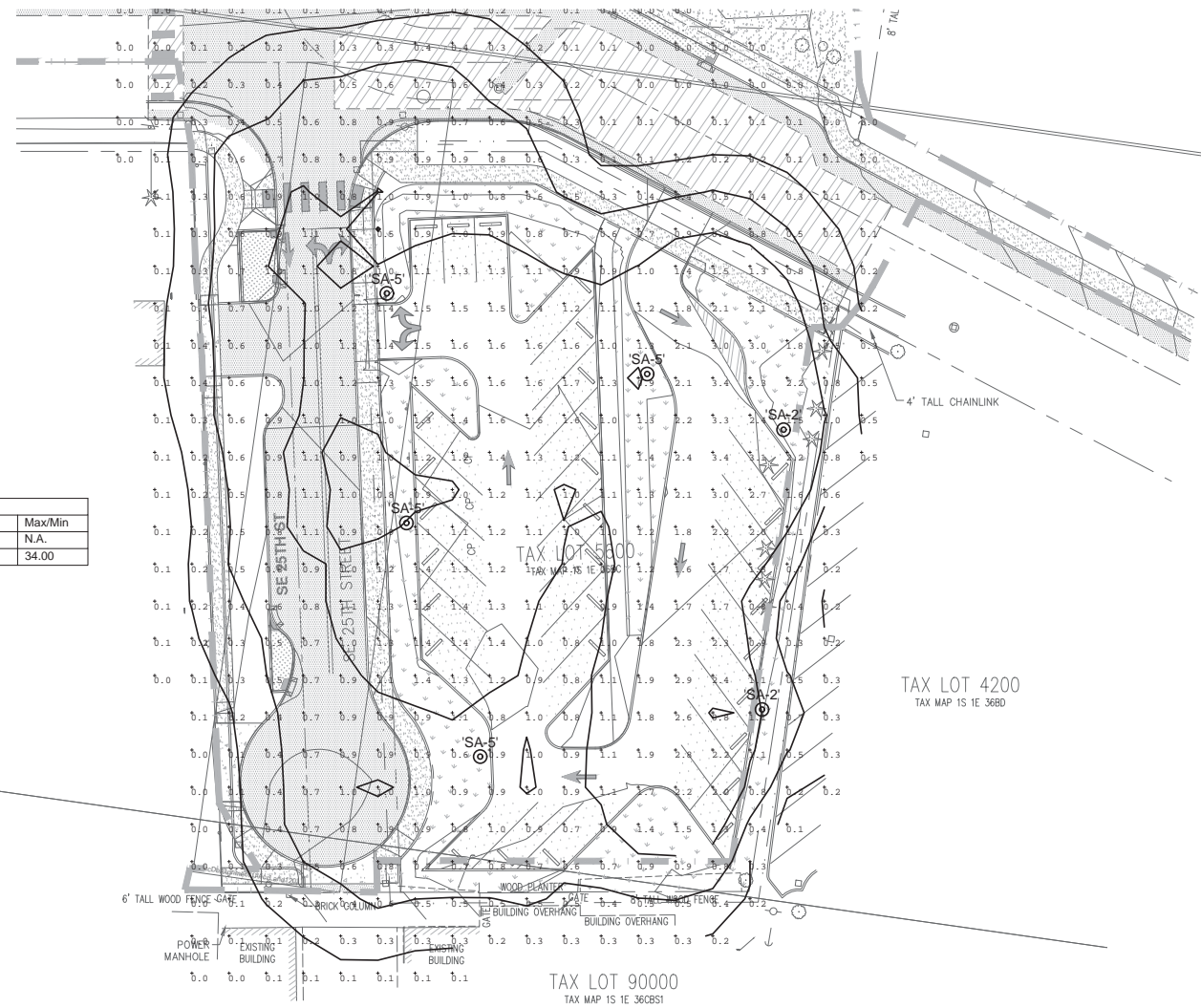


**Specifications**

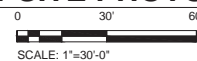
**EPA:** 1.125 ft<sup>2</sup>  
(0.105 m<sup>2</sup>)  
**Luminaire Height:** 6-3/8"  
(16.2 cm)  
**Overall Height:** 32"  
(81.3 cm)  
**Diameter:** 18"  
(45.7 cm)  
**Weight (max):** 37.5 lbs  
(17 kg)



Calculation Summary							
Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
Overall Site	Illuminance	Fc	0.79	3.4	0.0	N.A.	N.A.
South East Parking	Illuminance	Fc	1.06	3.4	0.1	10.60	34.00



**1 SITE PHOTOMETRICS - SOUTH PARKING LOT LIGHTING**



SCALE: 1"=30'-0"

key plan

revisions	

phase	LAND USE SET
date	03/15/2019
project	17010

SITE PHOTOMETRICS - LIGHTING

**EPH1**

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