KALAMAZOO RESA
CAREER & TECHNICAL EDUCATION CENTER

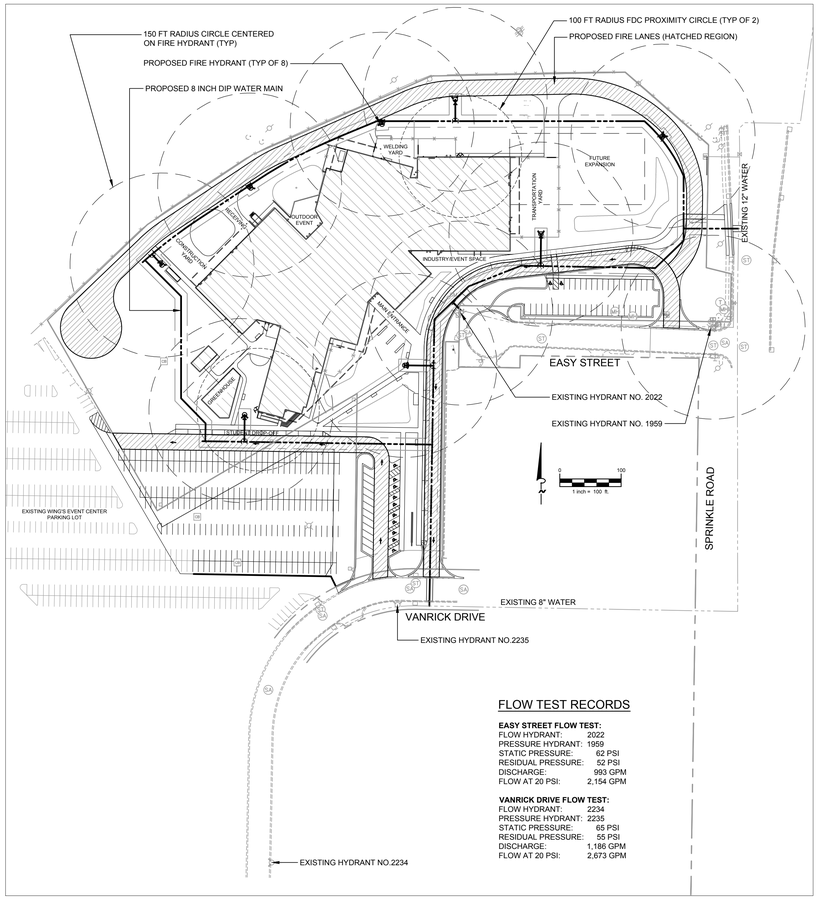
Site Plan Review
City of Kalamazoo
08/10/2022

GENERAL NOTES

EXCEPT WHERE OTHERWISE INDICATED ON THESE PLANS OR IN THE PROPOSAL AND SPECIFICATIONS CONTAINED THEREIN, ALL MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE 2020 MICHIGAN DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION.

THE PLACING OF PAVEMENT MARKINGS AND TRAFFIC CONTROL SIGNS SHALL BE DONE IN ACCORDANCE WITH THE 2011 MICHIGAN MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES AS AMENDED.

IN CONFORMANCE WITH PUBLIC ACT 174 OF 2013, ALL CONTRACTORS SHALL CALL MISS DIG @ 811 OR 800-482-7171 FOR PROTECTION OF UNDERGROUND UTILITIES. A MINIMUM OF THREE FULL WORKING DAYS (EXCLUDING SATURDAYS, SUNDAYS AND HOLIDAYS) PRIOR TO BEGINNING EACH EXCAVATION IN ANY AREA. MEMBERS WILL THUS BE ROUTINELY NOTIFIED. THIS DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OF NOTIFYING UTILITY OWNERS WHO MAY NOT BE A PART OF THE "MISS DIG" ALERT SYSTEM.



FLOW TEST RECORDS

EASY STREET FLOW TEST:

FLOW HYDRANT:	2022
PRESSURE HYDRANT:	1959
STATIC PRESSURE:	62 PSI
RESIDUAL PRESSURE:	52 PSI
DISCHARGE:	993 GPM
FLOW AT 20 PSI:	2,154 GPM

VANRICK DRIVE FLOW TEST:

FLOW HYDRANT:	2234
PRESSURE HYDRANT:	2235
STATIC PRESSURE:	65 PSI
RESIDUAL PRESSURE:	55 PSI
DISCHARGE:	1,186 GPM
FLOW AT 20 PSI:	2,673 GPM

SITE PLAN
RULE 6 ELEMENTS LOCATION MAP
SCALE: 1" = 100'

UTILITIES

ELECTRIC
CONSUMERS ENERGY
2500 E. CORK STREET
KALAMAZOO, MI 49001
ANDRE TAYLOR
(269) 337-2245
ANDRE.TAYLOR@CMENERGY.COM

GAS:
CONSUMERS ENERGY
2500 E. CORK STREET
KALAMAZOO, MI 49001
CHAD DEVOS
CHAD.DEVOS@CMENERGY.COM

TELEPHONE:
AT&T
2919 MILLCORK STREET
KALAMAZOO, MI 49001
CHRIS O'BRIEN
(810) 407-3523
CO2391@ATT.COM

CABLE:
CHARTER COMMUNICATIONS
(800) 242-8511
TWC_UTILITY_REQUESTS@CCISYSTEMS.COM

COMCAST CABLE
25626 TELEGRAPH ROAD
SOUTHFIELD, MI 48034
JEFF DOBIES
(734) 359-1669

FIBER OPTIC:
KRESA
1819 E MILHAM AVENUE
PORTAGE, MI 49002
BRIAN SCHUPBACH
(269) 250-9255
BRIAN.SCHUPBACH@KRESA.ORG

US SIGNAL
CHAD WINKLER
(269) 295-6455
CWINKLER@TKNS.NET

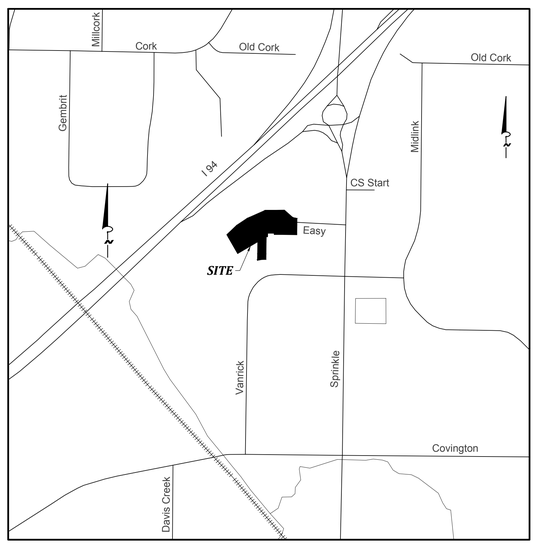
WATER:
CITY OF KALAMAZOO
415 E. STOCKBRIDGE AVENUE
KALAMAZOO, MI 49001
ANNA CRANDALL
(269) 337-8055
CRANDALLA@KALAMAZOOCITY.ORG

SEWER:
CITY OF KALAMAZOO
1415 NORTH HARRISON STREET
KALAMAZOO, MI 49001
SOHIL MANJIYANI
(269) 216-1794
MANJIYANIS@KALAMAZOOCITY.ORG

"MISS DIG" 811

INDEX OF PLANS

ELECTRICAL AND MECHANICAL DETAILS PROVIDED FOR REFERENCE - FINAL MEP DETAILS TO BE RELEASED IN FUTURE BID PACKAGES



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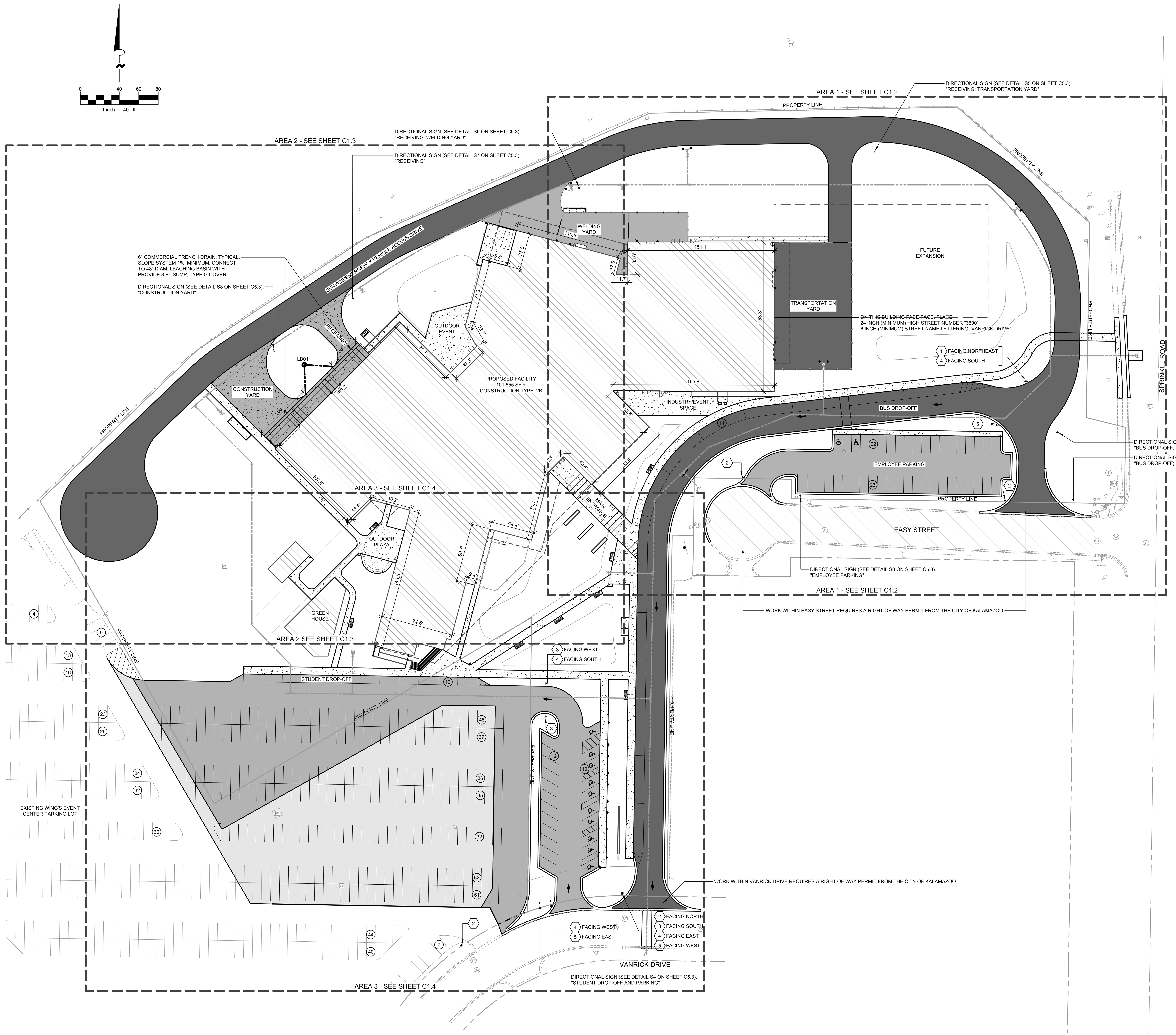
REVISIONS

DATE: JULY 2022
SCALE: 1" = 40'

CIVIL COVER SHEET

JOB No. 214175
C0.1



OVERALL SITE PLAN - KEY MAP
SCALE: 1" = 40'

LEGEND

EXISTING / PROPOSED
CABLE
ELECTRIC LINE
ELECTRIC LINE (OVERHEAD)
FIBER OPTIC LINE
GAS LINE
TELEPHONE LINE
FENCE
FORCEMAIN
GUARDRAIL
SANITARY SEWER
STORM SEWER
WATER MAIN
CENTER LINE

EXISTING TREE LINE
EXISTING DITCH LINE
EASEMENT LINE/GRADING PERMIT
GRADING LIMITS/LIMITS OF DISTURBANCE
PROPERTY LINE
RIGHT-OF-WAY LINE
SECTION LINE
TO BE ABANDONED

= ANTENNA
= CATCH BASIN
= CABLE RISER BOX
= CLEAN OUT
= CURB INLET
= ELECTRIC MANHOLE
= FIRE HYDRANT
= FOUND IRON PIPE
= GAS VALVE
= GUY ANCHOR
= LIGHT POLE
= MAILBOX
= MONITORING WELL
= POST
= SATELLITE DISH
= SANITARY MANHOLE
= SECTION CORNER
= SIGN
= PAVEMENT/SOIL BORING
= PROPOSED HYDRANT
= PROPOSED GATE VALVE & BOX
= PROPOSED GATE VALVE & VAULT
= PROPOSED REDUCER
= PROPOSED SANITARY MANHOLE
= PROPOSED STORM MANHOLE
= STORM MANHOLE
= TELEPHONE MANHOLE
= TELEPHONE RISER BOX
= TURNING POINT/TRAVERSE
= UTILITY POLE
= VAULT
= WATER ELEVATION
= WATER MANHOLE
= WATER METER
= WATER VALVE
= WATER SPIGOT
= WELL

TREE DESIGNATORS

BUSH
STUMP
CONIFEROUS TREE
DECIDUOUS TREE
CONIFEROUS TREE TO BE REMOVED
DECIDUOUS TREE TO BE REMOVED

LEGEND

LIGHT DUTY ASPHALT:
6" AGGREGATE BASE, MDOT 21AA
2" HMA, 2C BASE COURSE
1½" HMA, 5E3 TOP COURSE

HEAVY DUTY ASPHALT:
8" AGGREGATE BASE, MDOT 21AA
3" HMA, 2C BASE COURSE
2" HMA, 5E3 TOP COURSE

REINFORCED CONCRETE:
6" GRANULAR BASE, CL II, CIP
6" CONCRETE PAVEMENT
6 X 6 2.9 X 2.9 WWF REINFORCEMENT

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8" GRANULAR BASE, CL II, CIP
8" CONCRETE PAVEMENT
6 X 6 2.9 X 2.9 WWF REINFORCEMENT

SEAL AND RESTRIPE EXISTING ASPHALT

EXTERIOR SNOW MELT SYSTEM, SEE M7.2 FOR DETAILS

SITE GENERAL NOTES

1. DIMENSIONS REFER TO THE EDGE OF PAVEMENT UNLESS OTHERWISE NOTED
2. CONTRACTOR TO FIELD VERIFY ALL EXISTING TOPOGRAPHY AND STRUCTURES ON SITE. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY OF ANY DISCREPANCIES.
3. BUILDING DIMENSIONS ARE TO THE OUTSIDE FACE OF BUILDING, UNLESS NOTED OTHERWISE.
4. REFER TO ARCHITECTURAL AND STRUCTURAL PLANS TO VERIFY ALL BUILDING DIMENSIONS.

TRAFFIC SIGNAGE LEGEND

	Sign	Description
1	YIELD	R1-2 (36" x 36") 4 SFT SIGN, TYPE IIIA 1 - 3 LB POST (14 FT)
2	STOP	R1-1 (30" x 30") 6.25 SFT SIGN, TYPE IIIA 1 - 3 LB POST (14 FT)
3	DO NOT ENTER	R5-1 (30" x 30") 6.25 SFT SIGN, TYPE IIIA 1 - 3 LB POST (14 FT)
4	ONE WAY	R6-1L (12" x 36") 3 SFT SIGN, TYPE IIIC 1 - 3 LB POST (14 FT)
5	ONE WAY	R6-1R (12" x 36") 3 SFT SIGN, TYPE IIIC 1 - 3 LB POST (14 FT)

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No.	Date	Description	By
02	8/10/2022	ISSUED FOR SITE PLAN REVIEW	PDS
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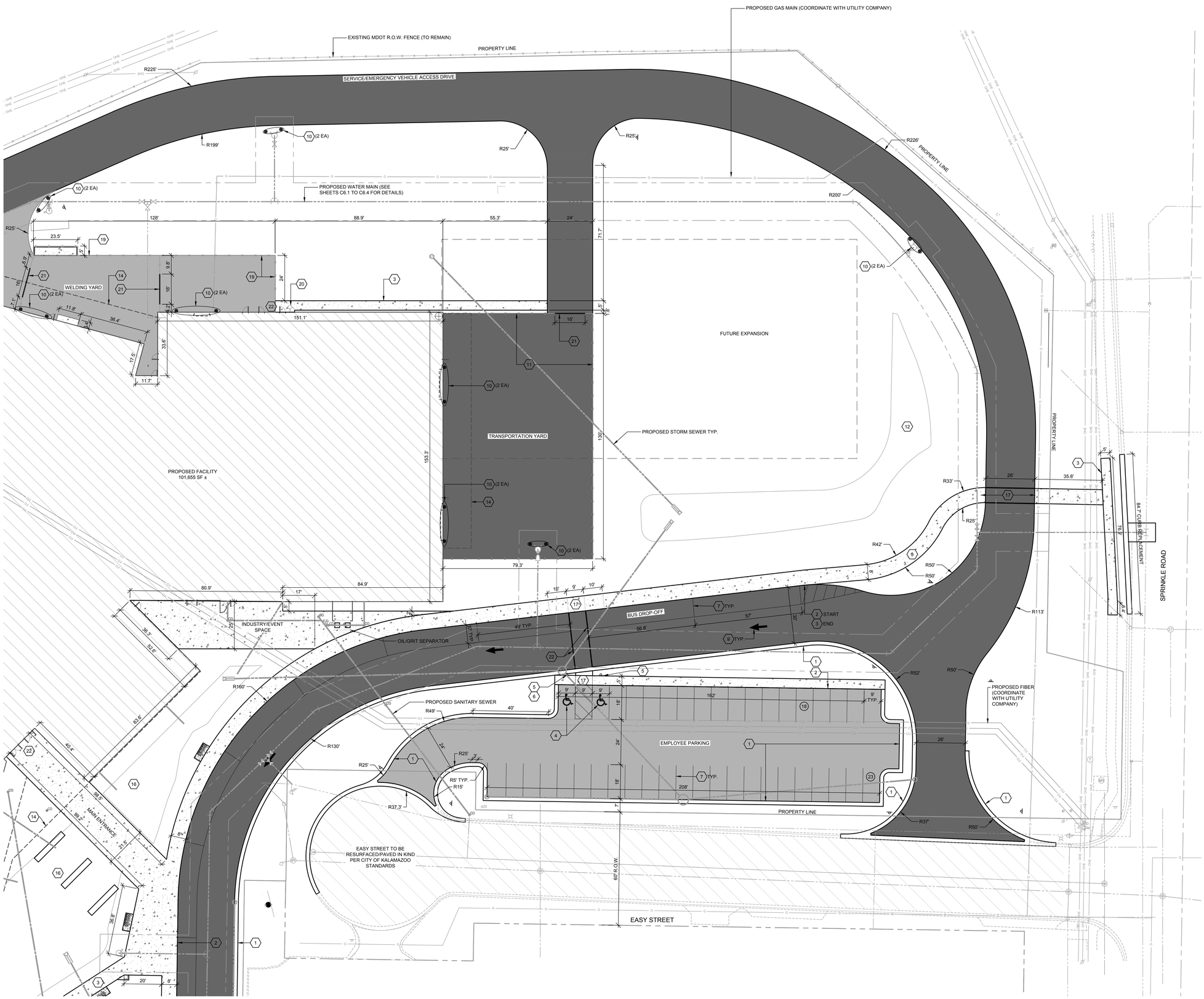
REVISIONS

DATE: JULY 2022
SCALE: 1" = 40'

SITE PLAN OVERALL

JOB No. 214175

C1.1



SITE PLAN - AREA 1
SCALE: 1" = 20'

0 20 30 40
1 inch = 20 ft.

LEGEND

EXISTING / PROPOSED

- CABLE
- ELECTRIC LINE
- ELECTRIC LINE (OVERHEAD)
- FIBER OPTIC LINE
- GAS LINE
- TELEPHONE LINE
- FENCE
- FORCEMAIN
- GUARDRAIL
- SANITARY SEWER
- STORM SEWER
- WATER MAIN
- CENTER LINE
- EXISTING TREE LINE
- EXISTING DITCH LINE
- EASEMENT LINE/GRADING PERMIT
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- PROPERTY LINE
- RIGHT-OF-WAY LINE
- SECTION LINE
- TO BE ABANDONED

- = ANTENNA
- = CATCH BASIN
- = CABLE RISER BOX
- = CLEAN OUT
- = CURB INLET
- = ELECTRIC MANHOLE
- = FIRE HYDRANT
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- = GAS VALVE
- = GUY ANCHOR
- = LIGHT POLE
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- = WATER MANHOLE
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- = WATER VALVE
- = WATER SPIGOT
- = WELL

TREE DESIGNATORS

- BUSH
- CONIFEROUS TREE
- CONIFEROUS TREE TO BE REMOVED
- STUMP
- DECIDUOUS TREE
- DECIDUOUS TREE TO BE REMOVED

LEGEND

- LIGHT DUTY ASPHALT: 6" AGGREGATE BASE, MDOT 21AA; 2" HMA, 13A BASE COURSE; 1 ½" HMA, 36A TOP COURSE
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1. TYPE C4 CURB AND GUTTER (SEE DETAILS)
2. THICKENED EDGE SIDEWALK INTEGRAL CURB AND GUTTER (SEE DETAILS)
3. CONCRETE SIDEWALK, TYP.
4. ACCESSIBLE PAVEMENT MARKINGS, TYP. (SEE DETAILS)
5. ACCESSIBLE PARKING SIGN, TYP. (MUTCD R7-8)
6. ACCESSIBLE PARKING SIGN, TYP. (MUTCD R7-8P)
7. 4" WIDE PAINTED SOLID WHITE LINE, TYP.
8. REFUSE ENCLOSURE (SEE ARCHITECTURAL)
9. DIRECTIONAL PAVEMENT MARKING (SEE DETAILS)
10. CONCRETE FILLED BOLLARD (SEE DETAILS)
11. ARCHITECTURAL FENCING, 8 FT
12. BIO-SWALE/RAIN GARDEN
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SITE PLAN AREA 1

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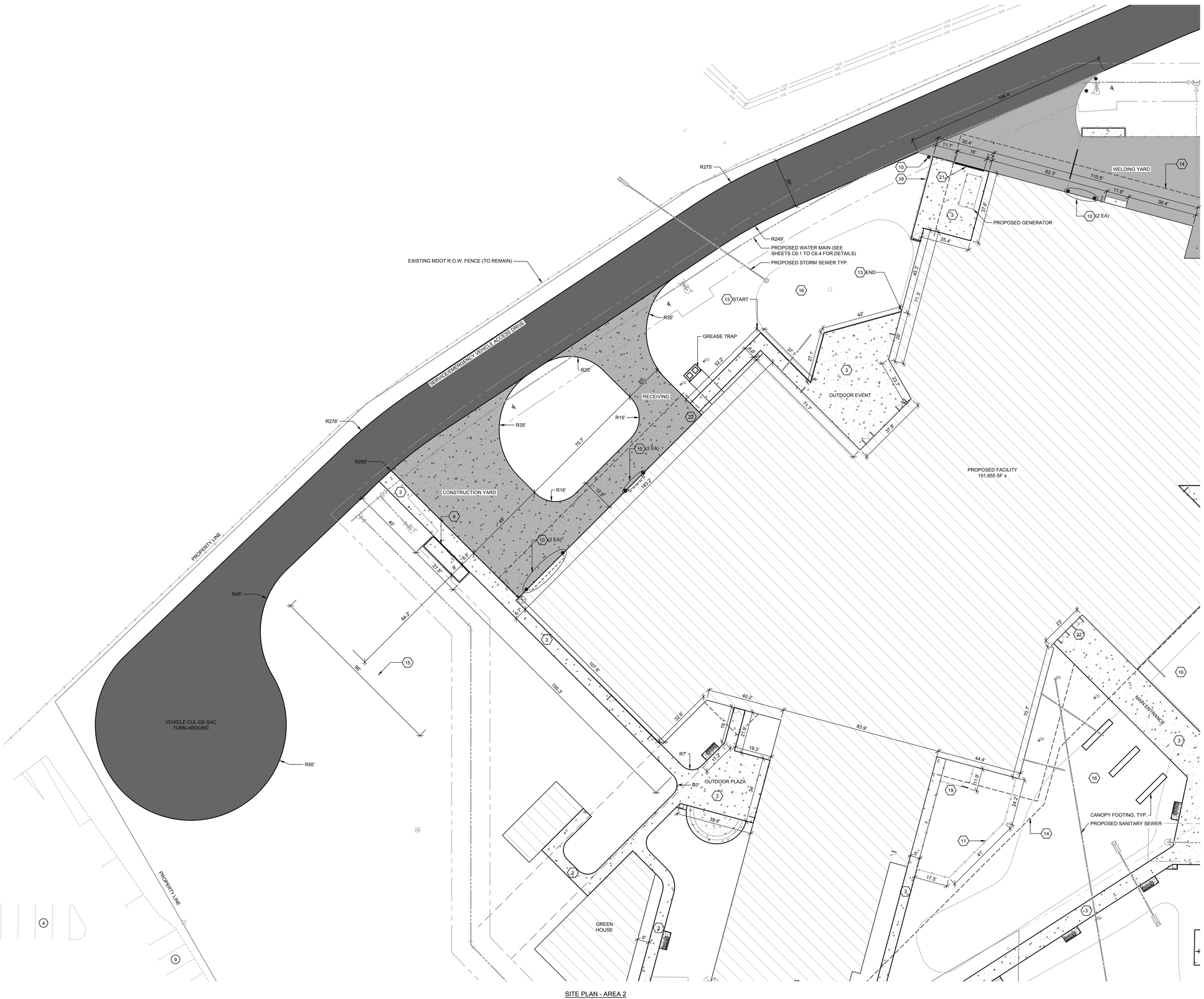
C1.2



SITE PLAN - AREA 2
SCALE: 1" = 20'

0 20 30 40
1 inch = 20 ft.

LEGEND

EXISTING	PROPOSED
	CABLE
	ELECTRIC LINE
OHE	ELECTRIC LINE (OVERHEAD)
	FIBER OPTIC LINE
	GAS LINE
	TELEPHONE LINE
	FENCE
	FORCEMAIN
	GUARDRAIL
	SANITARY SEWER
	STORM SEWER
	WATER MAIN
	CENTER LINE
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- = POST
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- = SANITARY MANHOLE
- = SECTION CORNER
- = SIGN
- = PAVEMENT/SOIL BORING
- = PROPOSED HYDRANT
- = PROPOSED GATE VALVE & BOX
- = PROPOSED GATE VALVE & VAULT
- = PROPOSED REDUCER
- = PROPOSED SANITARY MANHOLE
- = PROPOSED STORM MANHOLE
- = STORM MANHOLE
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- = TELEPHONE RISER BOX
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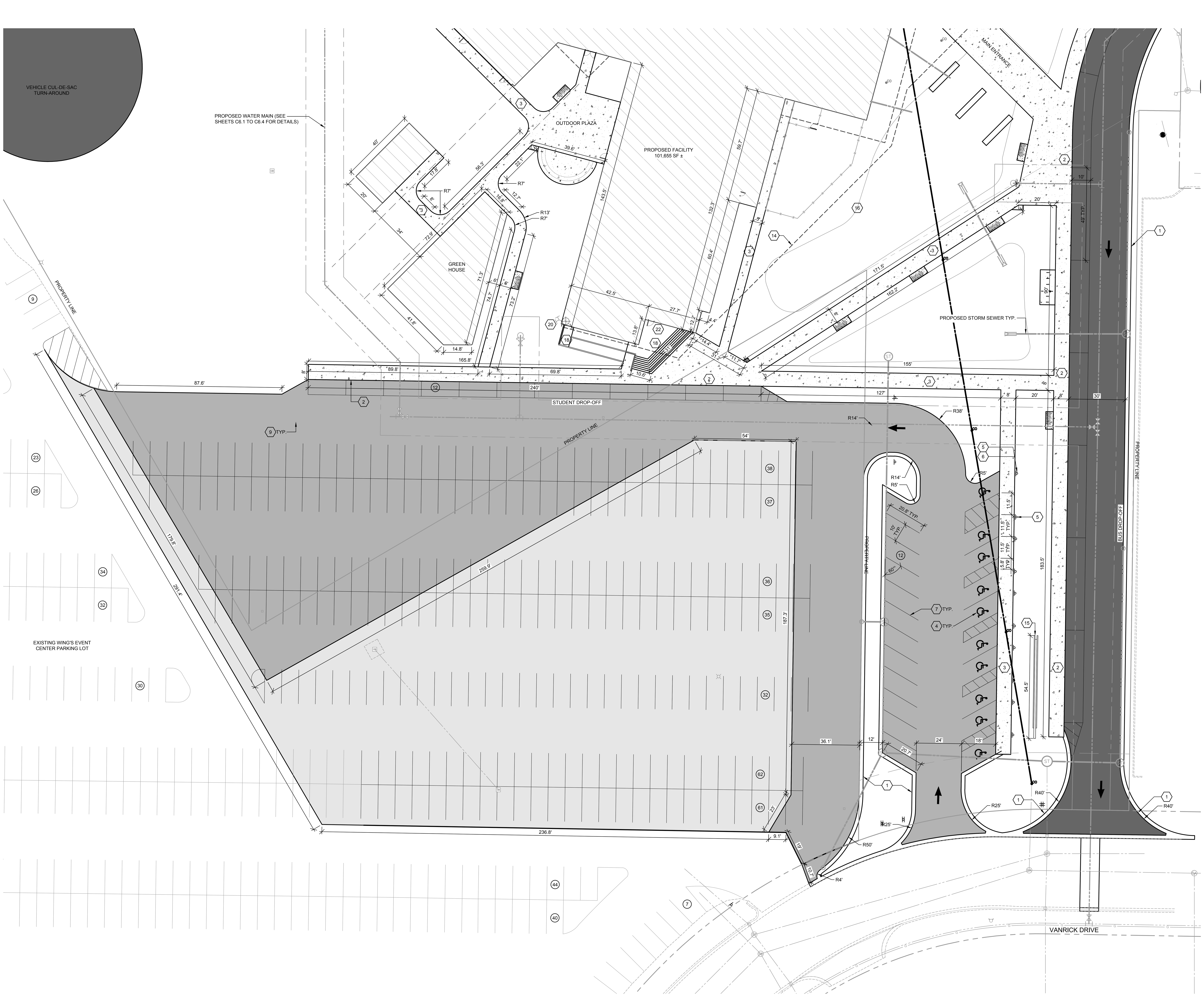
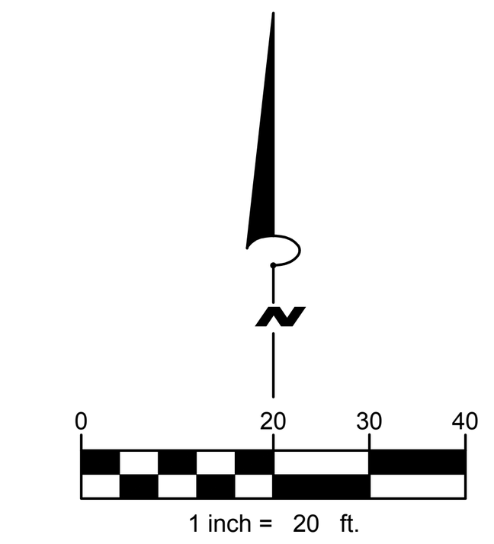
SITE PLAN
AREA 2

JOB No. 214175
C1.3



SITE PLAN - AREA 3
SCALE: 1" = 20'



LEGEND

EXISTING / PROPOSED

- CABLE
- ELECTRIC LINE
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= PROPOSED SANITARY MANHOLE
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= STORM MANHOLE
= TELEPHONE MANHOLE
= TELEPHONE RISER BOX
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= WATER METER
= WATER VALVE
= WATER SPIGOT
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- STUMP
- CONIFEROUS TREE
- DECIDUOUS TREE
- CONIFEROUS TREE TO BE REMOVED
- DECIDUOUS TREE TO BE REMOVED

LEGEND

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6" AGGREGATE BASE, MDOT 21AA
2" HMA, 13A BASE COURSE
$1\frac{1}{2}$" HMA, 36A TOP COURSE

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3" HMA, 2C BASE COURSE
2" HMA, 5E3 TOP COURSE

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6 X 6 2.9 X 2.9 WWF REINFORCEMENT

HEAVY DUTY REINFORCED CONCRETE :
8" GRANULAR BASE, CL II, CIP
8" CONCRETE PAVEMENT
6 X 6 2.9 X 2.9 WWF REINFORCEMENT

SEAL AND RESTRIPE EXISTING ASHPALT

SITE GENERAL NOTES

1. DIMENSIONS REFER TO THE EDGE OF PAVEMENT UNLESS OTHERWISE NOTED
2. CONTRACTOR TO FIELD VERIFY ALL EXISTING TOPOGRAPHY AND STRUCTURES ON SITE. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY OF ANY DISCREPANCIES.
3. BUILDING DIMENSIONS ARE TO THE OUTSIDE FACE OF BUILDING, UNLESS NOTED OTHERWISE.
4. REFER TO ARCHITECTURAL AND STRUCTURAL PLANS TO VERIFY ALL BUILDING DIMENSIONS.

KEY NOTES

1. TYPE C4 CURB AND GUTTER (SEE DETAILS)
2. THICKENED EDGE SIDEWALK INTEGRAL CURB AND GUTTER (SEE DETAILS)
3. CONCRETE SIDEWALK, TYP.
4. ACCESSIBLE PAVEMENT MARKINGS, TYP. (SEE DETAILS)
5. ACCESSIBLE PARKING SIGN, TYP. (MUTCD R7-8)
6. ACCESSIBLE PARKING SIGN, TYP. (MUTCD R7-8P)
7. 4" WIDE PAINTED SOLID WHITE LINE, TYP.
8. REFUSE ENCLOSURE (SEE ARCHITECTURAL)
9. DIRECTIONAL PAVEMENT MARKING (SEE DETAILS)
10. CONCRETE FILLED BOLLARD (SEE DETAILS)
11. ARCHITECTURAL FENCING, 8 FT
12. BIO-SWALE/RAIN GARDEN
13. RETAINING WALL
14. ROOF/ SECOND STORY OVERHANG
15. BRANDING WALL
16. WATER FEATURE
17. PEDESTRIAN RAMP
18. STAIR AND PEDESTRIAN RAMP
19. BLACK VINYL COATED CHAIN LINK FENCE, 8 FT
20. FIRE DEPARTMENT CONNECTION WITH SIGN, HORN, & STROBE PER CITY STANDARDS
21. GATE (MATERIAL TO MATCH FENCE)
22. KNOX BOX

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PROJECT NAME:

CTE Career & Technical Education

CAREER & TECHNICAL EDUCATION CENTER
VANRICK DRIVE
KALAMAZOO, MI 49001

KALAMAZOO RESA
INSPIRING EDUCATIONAL EXCELLENCE

KALAMAZOO RESA
1819 EAST MILHAM ROAD
PORTAGE, MI 49002

02	8/10/2022	PDS	ISSUED FOR SITE PLAN REVIEW
01	8/1/2022	PDS	ISSUED FOR BIDDING

REVISIONS

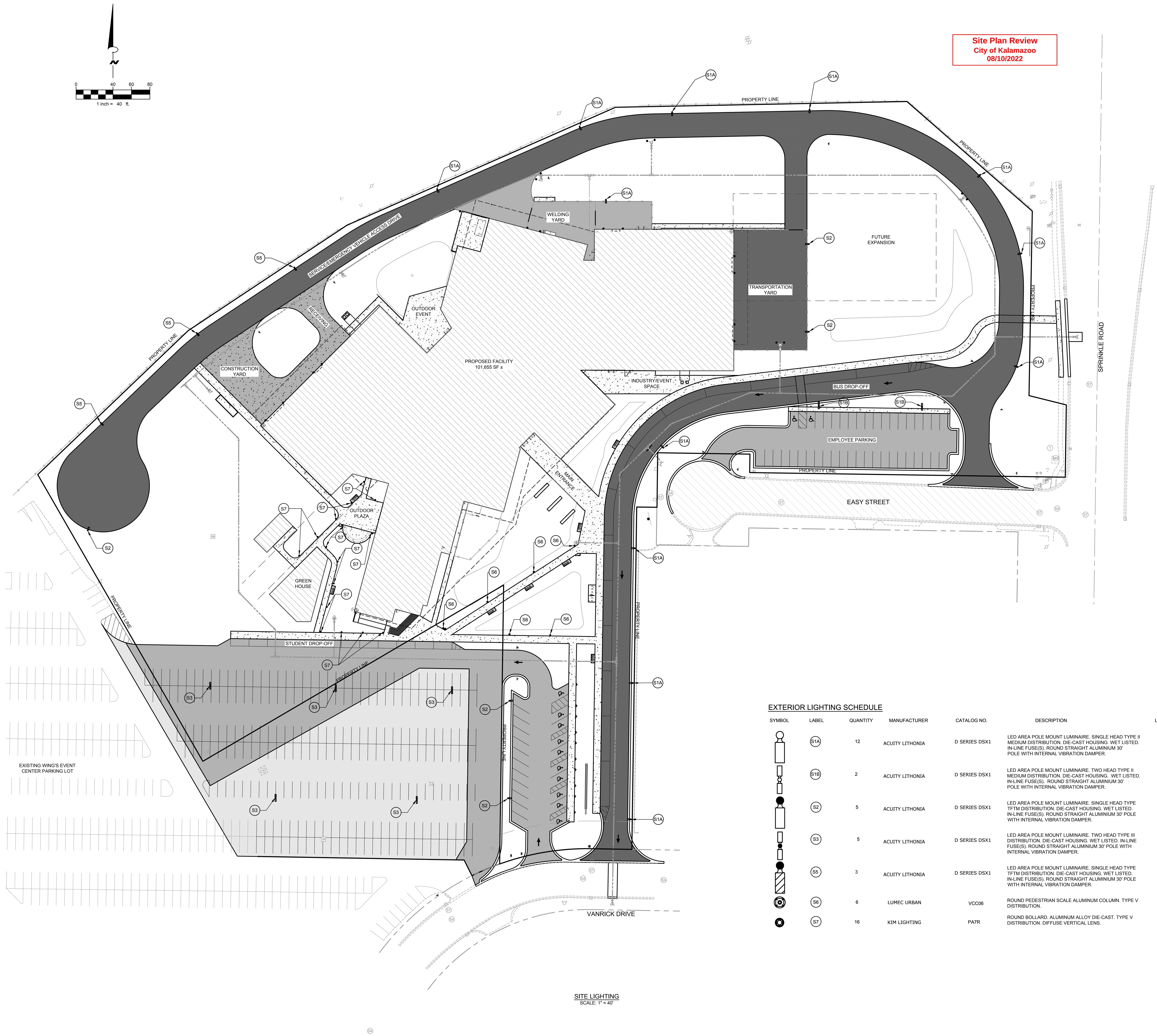
DATE: JULY 2022
SCALE: 1" = 20'

SITE PLAN AREA 3

JOB No. 214175

C1.4

Site Plan Review
City of Kalamazoo
08/10/2022



SITE LIGHTING
SCALE: 1" = 40'

EXTERIOR LIGHTING SCHEDULE

SYMBOL	LABEL	QUANTITY	MANUFACTURER	CATALOG NO.	DESCRIPTION	LAMP	NO. LAMPS	LUMENS/LAMP	WATTAGE
	S1A	12	ACUITY LITHONIA	D SERIES DSX1	LED AREA POLE MOUNT LUMINAIRE. SINGLE HEAD TYPE II MEDIUM DISTRIBUTION. DIE-CAST HOUSING. WET LISTED. IN-LINE FUSE(S). ROUND STRAIGHT ALUMINIUM 30' POLE WITH INTERNAL VIBRATION DAMPER.	LED	1	14,500	125
	S1B	2	ACUITY LITHONIA	D SERIES DSX1	LED AREA POLE MOUNT LUMINAIRE. TWO HEAD TYPE II MEDIUM DISTRIBUTION. DIE-CAST HOUSING. WET LISTED. IN-LINE FUSE(S). ROUND STRAIGHT ALUMINIUM 30' POLE WITH INTERNAL VIBRATION DAMPER.	LED	2	14,500	125
	S2	5	ACUITY LITHONIA	D SERIES DSX1	LED AREA POLE MOUNT LUMINAIRE. SINGLE HEAD TYPE TFTM DISTRIBUTION. DIE-CAST HOUSING. WET LISTED. IN-LINE FUSE(S). ROUND STRAIGHT ALUMINIUM 30' POLE WITH INTERNAL VIBRATION DAMPER.	LED	1	14,500	125
	S3	5	ACUITY LITHONIA	D SERIES DSX1	LED AREA POLE MOUNT LUMINAIRE. TWO HEAD TYPE III DISTRIBUTION. DIE-CAST HOUSING. WET LISTED. IN-LINE FUSE(S). ROUND STRAIGHT ALUMINIUM 30' POLE WITH INTERNAL VIBRATION DAMPER.	LED	2	14,500	125
	S5	3	ACUITY LITHONIA	D SERIES DSX1	LED AREA POLE MOUNT LUMINAIRE. SINGLE HEAD TYPE TFTM DISTRIBUTION. DIE-CAST HOUSING. WET LISTED. IN-LINE FUSE(S). ROUND STRAIGHT ALUMINIUM 30' POLE WITH INTERNAL VIBRATION DAMPER.	LED	1	24,250	207
	S6	6	LUMEC URBAN	VCC06	ROUND PEDESTRIAN SCALE ALUMINUM COLUMN. TYPE V DISTRIBUTION.	LED	1	4,330	34
	S7	16	KIM LIGHTING	PA7R	ROUND BOLLARD. ALUMINUM ALLOY DIE-CAST. TYPE V DISTRIBUTION. DIFFUSE VERTICAL LENS.	LED	1	1,875	34

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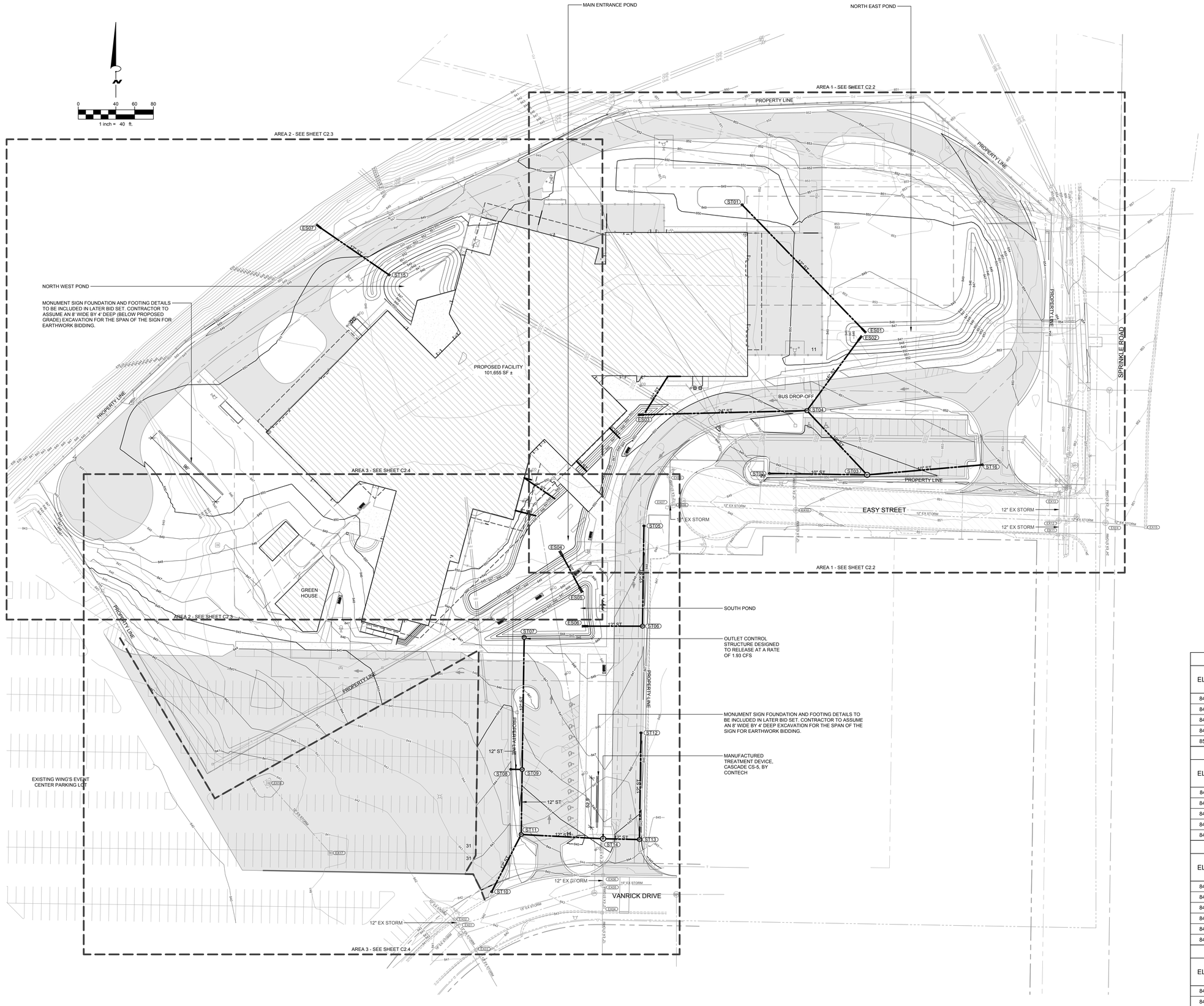
REVISIONS

\\KZOOFILE\Projects\Kalamazoo\214175 KRESA Career & Technical Edu Campus\B) Drawings\B50 AutoCAD\214175 - C1.5.dwg C1.5 8/9/2022 11:52:37 AM

DATE: JULY 2022
SCALE: 1" = 40'

SITE LAYOUT PLAN
SITE LIGHTING

JOB No. 214175
C1.5



LEGEND

EXISTING / PROPOSED

- CABLE
- ELECTRIC LINE
- ELECTRIC LINE (OVERHEAD)
- FIBER OPTIC LINE
- GAS LINE
- TELEPHONE LINE
- FENCE
- FORCEMAIN
- GUARDRAIL
- SANITARY SEWER
- STORM SEWER
- WATER MAIN
- CENTER LINE
- EXISTING TREE LINE
- EXISTING DITCH LINE
- EASEMENT LINE/GRADING PERMIT
- GRADING LIMITS/LIMITS OF DISTURBANCE
- PROPERTY LINE
- RIGHT-OF-WAY LINE
- SECTION LINE
- TO BE ABANDONED

- = ANTENNA
- = CATCH BASIN
- = CABLE RISER BOX
- = CLEAN OUT
- = CURB INLET
- = ELECTRIC MANHOLE
- = FIRE HYDRANT
- = FOUND IRON PIPE
- = GAS VALVE
- = GUY ANCHOR
- = LIGHT POLE
- = MAILBOX
- = MONITORING WELL
- = POST
- = SATELLITE DISH
- = SANITARY MANHOLE
- = SECTION CORNER
- = SIGN
- = PAVEMENT/SOIL BORING
- = PROPOSED HYDRANT
- = PROPOSED GATE VALVE & BOX
- = PROPOSED GATE VALVE & VAULT
- = PROPOSED REDUCER
- = PROPOSED SANITARY MANHOLE
- = PROPOSED STORM MANHOLE
- = STORM MANHOLE
- = TELEPHONE MANHOLE
- = TELEPHONE RISER BOX
- = TURNING POINT/TRAVERSE
- = UTILITY POLE
- = VAULT
- = WATER ELEVATION
- = WATER MANHOLE
- = WATER METER
- = WATER VALVE
- = WATER SPIGOT
- = WELL

TREE DESIGNATORS

- BUSH
- CONIFEROUS TREE
- CONIFEROUS TREE TO BE REMOVED
- STUMP
- DECIDUOUS TREE
- DECIDUOUS TREE TO BE REMOVED

STORM WATER DESIGN NOTES

1. STORMWATER DESIGN IS IN ACCORDANCE WITH THE 2015 CITY OF KALAMAZOO PERFORMANCE STANDARDS FOR GROUNDWATER PROTECTION WITHIN WELLHEAD PROTECTION ZONES AND STORMWATER MANAGEMENT
2. PRE-DEVELOPMENT PEAK RUNOFF RATE = 2.81 CFS, POST DEVELOPMENT RUNOFF RATE = 8.97 CFS. PROPOSED STORM NETWORK IS DESIGNED TO DISCHARGE TO CITY STORM SEWER AT A RATE OF 2.81 CFS.
3. REQUIRED STORAGE VOLUME = 36,769 CFT
4. TOTAL STORAGE VOLUME PROVIDED = 41,981 CFT

GRADING NOTES

1. ELEVATIONS SHOWN DEPICT EDGE OF METAL UNLESS OTHERWISE NOTED. CONTRACTOR SHALL COORDINATE WITH EXCAVATOR, LANDSCAPE, AND PAVING SUBCONTRACTORS REGARDING TOPSOIL THICKNESS FOR LANDSCAPE AREAS AND PAVEMENT SECTION THICKNESS FOR PAVED AREAS TO PROPERLY ENSURE ADEQUATE CUT TO ESTABLISH SUBGRADE ELEVATIONS.
2. ALL EARTHEN SLOPES SHALL BE 3:1 OR FLATTER UNLESS OTHERWISE NOTED
3. THE CONTRACTOR SHALL MATCH EXISTING ELEVATIONS AT THE PROPERTY LIMITS UNLESS OTHERWISE NOTED

NORTH WEST POND					
ELEV	AREA (sq. ft.)	DEPTH (ft)	AVG END INC. VOL. (cu. ft.)	AVG END TOTAL VOL. (cu. ft.)	REMARK
846.0	1,266	N/A	N/A	0	BOTTOM
847.0	1,796	1.0	1,531	1,531	N/A
848.0	2,392	1.0	2,094	3,625	N/A
849.0	3,055	1.0	2,724	6,348	N/A
850.0	3,787	1.0	3,421	9,769	HWL

NORTH EAST POND					
ELEV	AREA (sq. ft.)	DEPTH (ft)	AVG END INC. VOL. (cu. ft.)	AVG END TOTAL VOL. (cu. ft.)	REMARK
846.1	204	N/A	N/A	0	BOTTOM
847.0	2,333	0.9	1,141	1,141	N/A
847.4	3,035	0.4	1,074	2,215	HWL
848.0	4,162	0.6	2,159	4,374	N/A
849.0	11,329	1.0	7,746	12,120	N/A

MAIN ENTRANCE POND					
ELEV	AREA (sq. ft.)	DEPTH (ft)	AVG END INC. VOL. (cu. ft.)	AVG END TOTAL VOL. (cu. ft.)	REMARK
845.0	5,815	N/A	N/A	0	BOTTOM
846.0	6,979	1.0	6,397	6,397	N/A
847.0	8,198	1.0	7,588	13,985	N/A
847.4	8,695	0.4	3,379	17,364	HWL
848.0	9,452	0.6	5,444	22,808	N/A
848.4	9,969	0.4	3,884	26,692	N/A

SOUTH POND					
ELEV	AREA (sq. ft.)	DEPTH (ft)	AVG END INC. VOL. (cu. ft.)	AVG END TOTAL VOL. (cu. ft.)	REMARK
843.0	1,562	N/A	N/A	0	BOTTOM
844.0	2,237	1.0	1,899	1,899	N/A
845.0	2,747	1.0	2,492	4,391	N/A
846.0	3,304	1.0	3,025	7,416	N/A
847.0	3,905	1.0	3,604	11,021	N/A
847.4	4,158	0.4	1,613	12,633	HWL

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REVISIONS

DATE: JULY 2022
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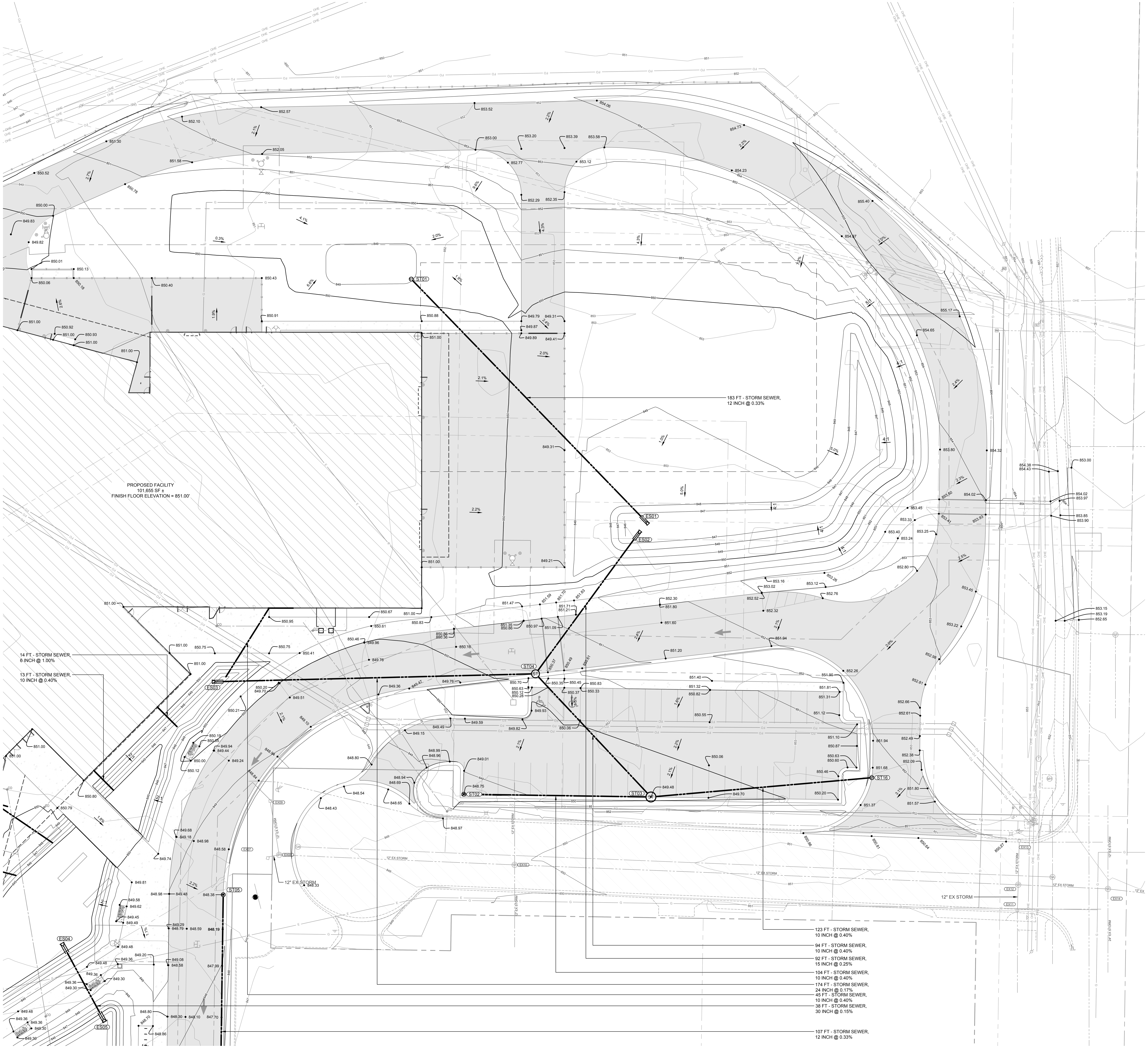
GRADING & DRAINAGE PLAN
OVERALL

JOB No. 214175
C2.1



0 20 30 40
1 inch = 20 ft.

LEGEND

EXISTING	PROPOSED	
C	C	CABLE
E	E	ELECTRIC LINE
OHE	OHE	ELECTRIC LINE (OVERHEAD)
FO	FO	FIBER OPTIC LINE
G	G	GAS LINE
T	T	TELEPHONE LINE
		FENCE
		FORCEMAIN
		GUARDRAIL
		SANITARY SEWER
		STORM SEWER
		WATER MAIN
		CENTER LINE

EXISTING TREE LINE
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GRADING LIMITS/LIMITS OF DISTURBANCE
PROPERTY LINE
RIGHT-OF-WAY LINE
SECTION LINE
TO BE ABANDONED

= ANTENNA
= CATCH BASIN
= CABLE RISER BOX
CO = CLEAN OUT
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= ELECTRIC MANHOLE
= FIRE HYDRANT
= FOUND IRON PIPE
= GAS VALVE
= GUY ANCHOR
= LIGHT POLE
= MAILBOX
MW = MONITORING WELL
= POST
= SATELLITE DISH
= SANITARY MANHOLE
= SECTION CORNER
= SIGN

SB = PAVEMENT/SOIL BORING
= PROPOSED HYDRANT
= PROPOSED GATE VALVE & BOX
= PROPOSED GATE VALVE & VAULT
= PROPOSED REDUCER
= PROPOSED SANITARY MANHOLE
= PROPOSED STORM MANHOLE
= STORM MANHOLE
= TELEPHONE MANHOLE
= TELEPHONE RISER BOX
= TURNING POINT/TRAVERSE
= UTILITY POLE
VLT = VAULT
= WATER ELEVATION
= WATER MANHOLE
WM = WATER METER
= WATER VALVE
= WATER SPIGOT
W = WELL

TREE DESIGNATORS

BUSH
STUMP
CONIFEROUS TREE
DECIDUOUS TREE
CONIFEROUS TREE TO BE REMOVED
DECIDUOUS TREE TO BE REMOVED

EXISTING STRUCTURES

EX01	EXISTING DR STRUCTURE	RIM 841.34 INV. 835.60 - 15" E INV. 835.34 - 18" SW INV. 836.36 - 12" NW INV. 836.32 - 12" SE
EX02	EXISTING DR STRUCTURE	RIM 841.31 INV. 836.61 - 12" SE INV. 836.81 - 12" NW
EX03	EXISTING DR STRUCTURE	RIM 841.31 INV. 837.47 - 12" NW INV. 837.71 - 12" SE
EX04	EXISTING DR STRUCTURE	RIM 843.15 INV. 838.70 - 12" N INV. 839.00 - 12" S
EX05	EXISTING DR STRUCTURE	RIM 843.23 INV. 837.39 - 15" E INV. 837.17 - 15" W INV. 837.91 - 12" N INV. 937.75 - 12" S
EX06	EXISTING DR STRUCTURE	RIM 843.07 INV. 838.24 - 12" S INV. 838.49 - 12" N
EX07	EXISTING DR STRUCTURE	RIM 848.16 INV. 844.66 - 12" E
EX08	EXISTING DR STRUCTURE	RIM 848.24 INV. 844.54 - 12" N INV. 844.54 - 12" W INV. 844.44 - 12" E
EX09	EXISTING DR STRUCTURE	RIM 848.13 INV. 844.93 - 12" S
EX10	EXISTING DR STRUCTURE	RIM 849.92 INV. 843.92 - 12" W INV. 843.92 - 12" E INV. 844.19 - 12" N INV. 844.19 - 12" S
EX11	EXISTING DR STRUCTURE	RIM 850.19 INV. 847.19 - 12" N
EX12	EXISTING DR STRUCTURE	RIM 850.38 INV. 842.98 - 12" W INV. 846.18 - 12" S INV. 842.88 - 12" E INV. 845.53 - 12" N
EX13	EXISTING DR STRUCTURE	RIM 850.22 INV. 846.87 - 12" S
EX14	EXISTING DR STRUCTURE	RIM 844.10 INV. 842.93 - 12" W INV. 845.73 - 12" N INV. 845.58 - 12" E INV. 842.58 - 24" S
EX15	EXISTING DR STRUCTURE	RIM 850.34 INV. 846.00 - 12" W
EX16	EXISTING DR STRUCTURE	RIM 839.28 INV. 834.73 - 12" SE
EX17	EXISTING DR STRUCTURE	RIM 840.33 INV. 835.93 - 12" NW

STORM STRUCTURES

ST01	DR STRUCTURE, 24 INCH DIA COVER G 2.0 FT SUMP	RIM 849.00 INV. 847.14 - 12" SE
ST02	DR STRUCTURE, 24 INCH DIA COVER K 0.0 FT SUMP	RIM 848.75 INV. 847.08 - 10" E
ST03	DR STRUCTURE, 60 INCH DIA COVER K 2.0 FT SUMP	RIM 849.48 INV. 846.66 - 10" W INV. 846.66 - 10" E INV. 846.66 - 10" NW
ST05	DR STRUCTURE, 24 INCH DIA COVER K 0.0 FT SUMP	RIM 848.38 INV. 844.45 - 12" S
ST06	DR STRUCTURE, 48 INCH DIA COVER K 2.0 FT SUMP	RIM 847.31 INV. 844.10 - 12" N INV. 844.10 - 12" W
ST07	DR STRUCTURE, 48 INCH DIA COVER G 2.0 FT SUMP	RIM 847.40 INV. 843.90 - 12" S
ST08	DR STRUCTURE, 24 INCH DIA COVER K 0.0 FT SUMP	RIM 843.88 INV. 841.83 - 12" E
ST09	DR STRUCTURE, 48 INCH DIA COVER K 2.0 FT SUMP	RIM 845.42 INV. 841.79 - 12" N INV. 841.79 - 12" W INV. 841.79 - 12" S
ST10	DR STRUCTURE, 24 INCH DIA COVER K 0.0 FT SUMP	RIM 842.20 INV. 840.98 - 12" NE
ST11	DR STRUCTURE, 48 INCH DIA COVER K 2.0 FT SUMP	RIM 843.76 INV. 840.75 - 12" N INV. 840.75 - 12" SW INV. 840.75 - 12" E
ST12	DR STRUCTURE, 24 INCH DIA COVER K 0.0 FT SUMP	RIM 846.18 INV. 839.40 - 12" S
ST13	DR STRUCTURE, 48 INCH DIA COVER K 2.0 FT SUMP	RIM 844.35 INV. 839.02 - 12" N INV. 839.02 - 12" W
ST14	DR STRUCTURE, 60 INCH DIA SOLID PER MANUFACTURER 4.5 FT SUMP	RIM 845.21 INV. 838.89 - 12" E INV. 838.89 - 12" W INV. 838.89 - 12" S
ST16	DR STRUCTURE, 24 INCH DIA COVER K 0.0 FT SUMP	RIM 851.60 INV. 847.15 - 10" W

END SECTIONS

ES01	PROPOSED CONC END SECTION	INV. 846.53 - 12" NW
ES02	PROPOSED CONC END SECTION	INV. 846.52 - 15" SW
ES03	PROPOSED CONC END SECTION	INV. 845.99 - 24" E
ES04	PROPOSED CONC END SECTION	
ES05	PROPOSED CONC END SECTION	INV. 845.45 - 30" NW
ES06	PROPOSED CONC END SECTION	INV. 843.90 - 12" E
ES07	PROPOSED CONC END SECTION	INV. 847.56 - 12" SE

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P:\Kalamazoo\214175 KRESA Career & Technical Edu Campus\B) Drawings\B50 AutoCAD\214175 - C2.2.dwg C2.2 8/1/2022 3:09:56 PM

DATE: JULY 2022
SCALE: 1" = 20'

GRADING & DRAINAGE PLAN
AREA 1

JOB No. 214175

C2.2

0 20 30 40
1 inch = 20 ft.

LEGEND

EXISTING	PROPOSED	
C	C	CABLE
E	E	ELECTRIC LINE
OHE	OHE	ELECTRIC LINE (OVERHEAD)
FO	FO	FIBER OPTIC LINE
G	G	GAS LINE
T	T	TELEPHONE LINE
		FENCE
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		GUARDRAIL
		SANITARY SEWER
		STORM SEWER
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		CENTER LINE

EXISTING TREE LINE
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EASEMENT LINE/GRADING PERMIT
GRADING LIMITS/LIMITS OF DISTURBANCE
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- = GAS VALVE
- = GUY ANCHOR
- = LIGHT POLE
- = MAILBOX
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- = SIGN
- = PAVEMENT/SOIL BORING
- = PROPOSED HYDRANT
- = PROPOSED GATE VALVE & BOX
- = PROPOSED GATE VALVE & VAULT
- = PROPOSED REDUCER
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TREE DESIGNATORS

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EX08 EXISTING DR STRUCTURE	RIM 848.24 INV. 844.54 - 12" N INV. 844.54 - 12" W INV. 844.44 - 12" E
EX09 EXISTING DR STRUCTURE	RIM 848.13 INV. 844.93 - 12" S
EX10 EXISTING DR STRUCTURE	RIM 849.92 INV. 843.92 - 12" W INV. 843.92 - 12" E INV. 844.19 - 12" N INV. 844.19 - 12" S
EX11 EXISTING DR STRUCTURE	RIM 850.19 INV. 847.19 - 12" N
EX12 EXISTING DR STRUCTURE	RIM 850.38 INV. 842.98 - 12" W INV. 846.18 - 12" S INV. 842.88 - 12" E INV. 845.53 - 12" N
EX13 EXISTING DR STRUCTURE	RIM 850.22 INV. 846.87 - 12" S
EX14 EXISTING DR STRUCTURE	RIM 844.10 INV. 842.93 - 12" W INV. 845.73 - 12" N INV. 845.58 - 12" E INV. 842.58 - 24" S
EX15 EXISTING DR STRUCTURE	RIM 850.34 INV. 846.00 - 12" W
EX16 EXISTING DR STRUCTURE	RIM 839.28 INV. 834.73 - 12" SE
EX17 EXISTING DR STRUCTURE	RIM 840.33 INV. 835.93 - 12" NW

STORM STRUCTURES

ST01 DR STRUCTURE, 24 INCH DIA COVER G 2.0 FT SUMP	RIM 849.00 INV. 847.14 - 12" SE
ST02 DR STRUCTURE, 24 INCH DIA COVER K 0.0 FT SUMP	RIM 848.75 INV. 847.08 - 10" E
ST03 DR STRUCTURE, 60 INCH DIA COVER K 2.0 FT SUMP	RIM 849.48 INV. 846.66 - 10" W INV. 846.66 - 10" E INV. 846.66 - 10" NW
ST05 DR STRUCTURE, 24 INCH DIA COVER K 0.0 FT SUMP	RIM 848.38 INV. 844.45 - 12" S
ST06 DR STRUCTURE, 48 INCH DIA COVER K 2.0 FT SUMP	RIM 847.31 INV. 844.10 - 12" N INV. 844.10 - 12" W
ST07 DR STRUCTURE, 48 INCH DIA COVER G 2.0 FT SUMP	RIM 847.40 INV. 843.90 - 12" S
ST08 DR STRUCTURE, 24 INCH DIA COVER K 0.0 FT SUMP	RIM 843.88 INV. 841.83 - 12" E
ST09 DR STRUCTURE, 48 INCH DIA COVER K 2.0 FT SUMP	RIM 845.42 INV. 841.79 - 12" N INV. 841.79 - 12" W INV. 841.79 - 12" S
ST10 DR STRUCTURE, 24 INCH DIA COVER K 0.0 FT SUMP	RIM 842.20 INV. 840.98 - 12" NE
ST11 DR STRUCTURE, 48 INCH DIA COVER K 2.0 FT SUMP	RIM 843.76 INV. 840.75 - 12" N INV. 840.75 - 12" SW INV. 840.75 - 12" E
ST12 DR STRUCTURE, 24 INCH DIA COVER K 0.0 FT SUMP	RIM 846.18 INV. 839.40 - 12" S
ST13 DR STRUCTURE, 48 INCH DIA COVER K 2.0 FT SUMP	RIM 844.35 INV. 839.02 - 12" N INV. 839.02 - 12" W
ST14 DR STRUCTURE, 60 INCH DIA SOLID PER MANUFACTURER 4.5 FT SUMP	RIM 845.21 INV. 838.89 - 12" E INV. 838.89 - 12" W INV. 838.89 - 12" S
ST16 DR STRUCTURE, 24 INCH DIA COVER K 0.0 FT SUMP	RIM 851.60 INV. 847.15 - 10" W

END SECTIONS

ES01 PROPOSED CONC END SECTION	INV. 846.53 - 12" NW
ES02 PROPOSED CONC END SECTION	INV. 846.52 - 15" SW
ES03 PROPOSED CONC END SECTION	INV. 845.99 - 24" E
ES04 PROPOSED CONC END SECTION	
ES05 PROPOSED CONC END SECTION	INV. 845.45 - 30" NW
ES06 PROPOSED CONC END SECTION	INV. 843.90 - 12" E
ES07 PROPOSED CONC END SECTION	INV. 847.56 - 12" SE

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DATE: JULY 2022
SCALE: 1" = 20'

GRADING & DRAINAGE PLAN OVERALL

JOB No. 214175

C2.3

LEGEND

EXISTING	PROPOSED
CABLE	CABLE
ELECTRIC LINE	ELECTRIC LINE
ELECTRIC LINE (OVERHEAD)	ELECTRIC LINE (OVERHEAD)
FIBER OPTIC LINE	FIBER OPTIC LINE
GAS LINE	GAS LINE
TELEPHONE LINE	TELEPHONE LINE
FENCE	FENCE
FORCEMAIN	FORCEMAIN
GUARDRAIL	GUARDRAIL
SANITARY SEWER	SANITARY SEWER
STORM SEWER	STORM SEWER
WATER MAIN	WATER MAIN
CENTER LINE	CENTER LINE

EXISTING TREE LINE
EXISTING DITCH LINE
EASEMENT LINE/GRADING PERMIT
GRADING LIMITS/LIMITS OF DISTURBANCE
PROPERTY LINE
RIGHT-OF-WAY LINE
SECTION LINE
TO BE ABANDONED

= ANTENNA
= CATCH BASIN
= CABLE RISER BOX
= CLEAN OUT
= CURB INLET
= ELECTRIC MANHOLE
= FIRE HYDRANT
= FOUND IRON PIPE
= GAS VALVE
= GUY ANCHOR
= LIGHT POLE
= MAILBOX
= MONITORING WELL
= POST
= SATELLITE DISH
= SANITARY MANHOLE
= SECTION CORNER
= SIGN
= PAVEMENT/SOIL BORING
= PROPOSED HYDRANT
= PROPOSED GATE VALVE & BOX
= PROPOSED GATE VALVE & VAULT
= PROPOSED REDUCER
= PROPOSED SANITARY MANHOLE
= PROPOSED STORM MANHOLE
= STORM MANHOLE
= TELEPHONE MANHOLE
= TELEPHONE RISER BOX
= TURNING POINT/TRAVERSE
= UTILITY POLE
= VAULT
= WATER ELEVATION
= WATER MANHOLE
= WATER METER
= WATER VALVE
= WATER SPIGOT
= WELL

TREE DESIGNATORS

BUSH
STUMP
CONIFEROUS TREE
DECIDUOUS TREE
CONIFEROUS TREE TO BE REMOVED
DECIDUOUS TREE TO BE REMOVED

EXISTING STRUCTURES

EX01	EXISTING DR STRUCTURE	RIM 841.34 INV. 835.60 - 15" E INV. 835.34 - 18" SW INV. 836.36 - 12" NW INV. 836.32 - 12" SE
EX02	EXISTING DR STRUCTURE	RIM 841.31 INV. 836.61 - 12" SE INV. 836.81 - 12" NW
EX03	EXISTING DR STRUCTURE	RIM 841.31 INV. 837.47 - 12" NW INV. 837.71 - 12" SE
EX04	EXISTING DR STRUCTURE	RIM 843.15 INV. 838.70 - 12" N INV. 839.00 - 12" S
EX05	EXISTING DR STRUCTURE	RIM 843.23 INV. 837.39 - 15" E INV. 837.17 - 15" W INV. 837.91 - 12" N INV. 937.75 - 12" S
EX06	EXISTING DR STRUCTURE	RIM 843.07 INV. 838.24 - 12" S INV. 838.49 - 12" N
EX07	EXISTING DR STRUCTURE	RIM 848.16 INV. 844.66 - 12" E
EX08	EXISTING DR STRUCTURE	RIM 848.24 INV. 844.54 - 12" N INV. 844.54 - 12" W INV. 844.44 - 12" E
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EX11	EXISTING DR STRUCTURE	RIM 850.19 INV. 847.19 - 12" N
EX12	EXISTING DR STRUCTURE	RIM 850.38 INV. 842.98 - 12" W INV. 846.18 - 12" S INV. 842.88 - 12" E INV. 845.53 - 12" N
EX13	EXISTING DR STRUCTURE	RIM 850.22 INV. 846.87 - 12" S
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ST05	DR STRUCTURE, 24 INCH DIA COVER K 0.0 FT SUMP	RIM 848.38 INV. 844.45 - 12" S
ST06	DR STRUCTURE, 48 INCH DIA COVER K 2.0 FT SUMP	RIM 847.31 INV. 844.10 - 12" N INV. 844.10 - 12" W
ST07	DR STRUCTURE, 48 INCH DIA COVER G 2.0 FT SUMP	RIM 847.40 INV. 843.90 - 12" S
ST08	DR STRUCTURE, 24 INCH DIA COVER K 0.0 FT SUMP	RIM 843.88 INV. 841.83 - 12" E
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ST10	DR STRUCTURE, 24 INCH DIA COVER K 0.0 FT SUMP	RIM 842.20 INV. 840.98 - 12" NE
ST11	DR STRUCTURE, 48 INCH DIA COVER K 2.0 FT SUMP	RIM 843.76 INV. 840.75 - 12" N INV. 840.75 - 12" SW INV. 840.75 - 12" E
ST12	DR STRUCTURE, 24 INCH DIA COVER K 0.0 FT SUMP	RIM 846.18 INV. 839.40 - 12" S
ST13	DR STRUCTURE, 48 INCH DIA COVER K 2.0 FT SUMP	RIM 844.35 INV. 839.02 - 12" N INV. 839.02 - 12" W
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ES02	PROPOSED CONC END SECTION	INV. 846.52 - 15" SW
ES03	PROPOSED CONC END SECTION	INV. 845.99 - 24" E
ES04	PROPOSED CONC END SECTION	
ES05	PROPOSED CONC END SECTION	INV. 845.45 - 30" NW
ES06	PROPOSED CONC END SECTION	INV. 843.90 - 12" E
ES07	PROPOSED CONC END SECTION	INV. 847.56 - 12" SE

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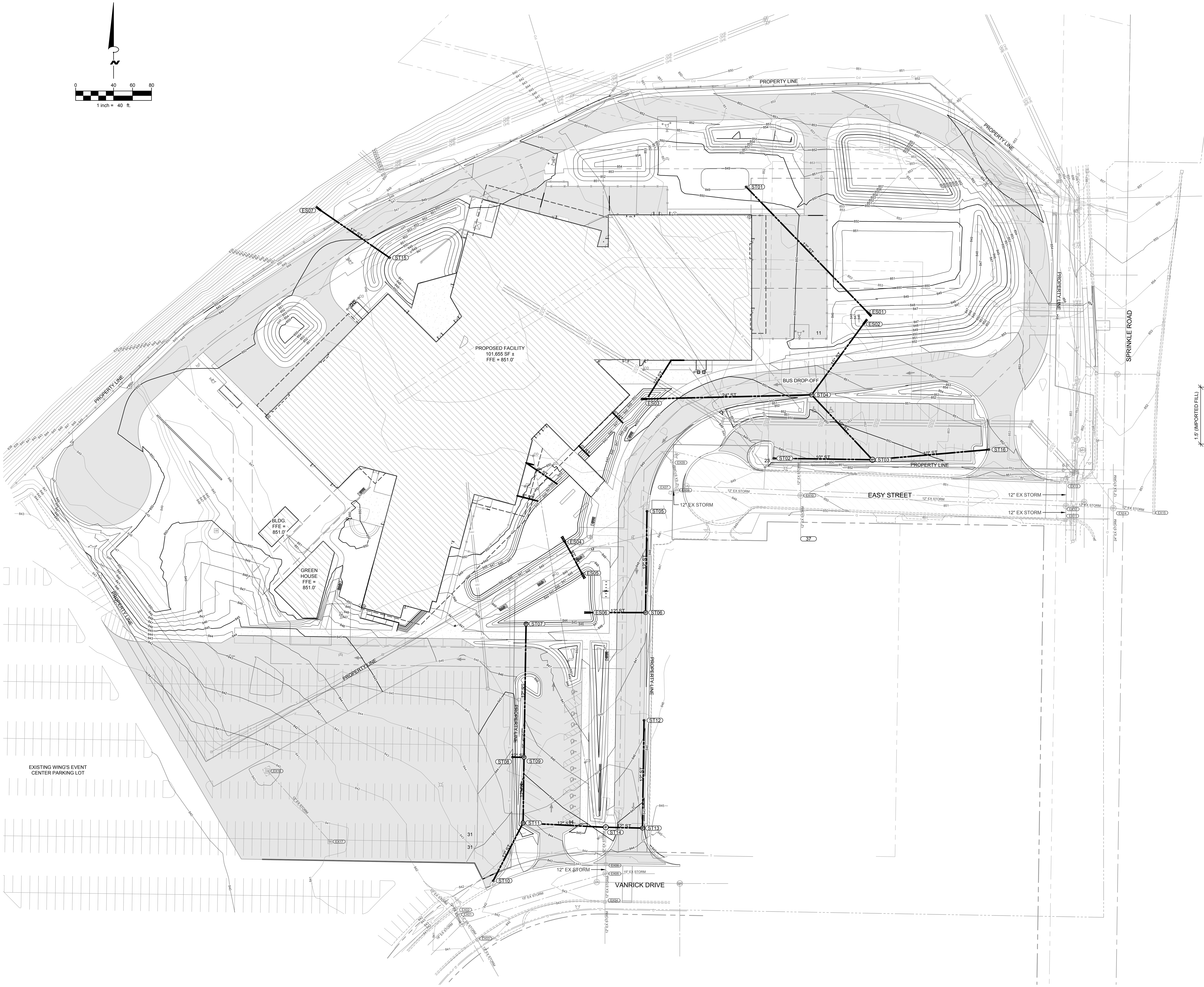
DATE: JULY 2022
SCALE: 1" = 20'

GRADING & DRAINAGE PLAN
AREA 3

JOB No. 214175

C2.4



LEGEND

EXISTING | PROPOSED

- CABLE
- ELECTRIC LINE
- ELECTRIC LINE (OVERHEAD)
- FIBER OPTIC LINE
- GAS LINE
- TELEPHONE LINE
- FENCE
- FORCEMAIN
- GUARDRAIL
- SANITARY SEWER
- STORM SEWER
- WATER MAIN
- CENTER LINE
- EXISTING TREE LINE
- EXISTING DITCH LINE
- EASEMENT LINE/GRADING PERMIT
- GRADING LIMITS/LIMITS OF DISTURBANCE
- PROPERTY LINE
- RIGHT-OF-WAY LINE
- SECTION LINE
- TO BE ABANDONED

- = ANTENNA
- = CATCH BASIN
- = CABLE RISER BOX
- = CLEAN OUT
- = CURB INLET
- = ELECTRIC MANHOLE
- = FIRE HYDRANT
- = FOUND IRON PIPE
- = GAS VALVE
- = GUY ANCHOR
- = LIGHT POLE
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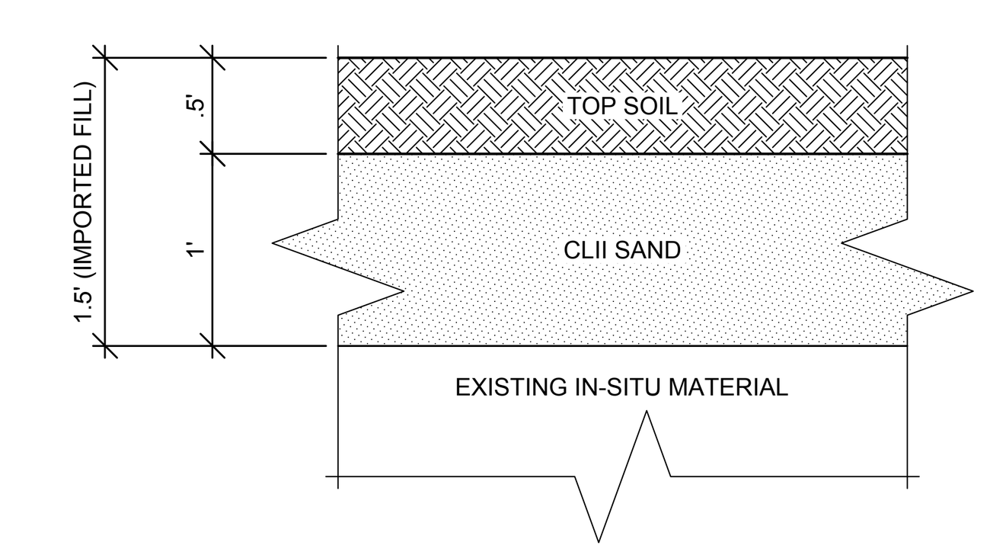
- = VAULT
- = WATER ELEVATION
- = WATER MANHOLE
- = WATER METER
- = WATER VALVE
- = WATER SPIGOT
- = WELL

TREE DESIGNATORS

- BUSH
- STUMP
- CONIFEROUS TREE
- DECIDUOUS TREE
- CONIFEROUS TREE TO BE REMOVED
- DECIDUOUS TREE TO BE REMOVED

BID ALTERNATE NOTE

1. ALTERNATE GRADING PLAN ASSUMES 1.5' OF IMPORTED FILL AT ALL NON-PAVED AREAS. THIS DRAWING ACCOUNTS FOR PLACING APPROXIMATELY 7,000 CYDS OF VIRGIN FILL.



ALTERNATE GREENSPACE CROSS SECTION

SCALE: 1" = 1'-0"

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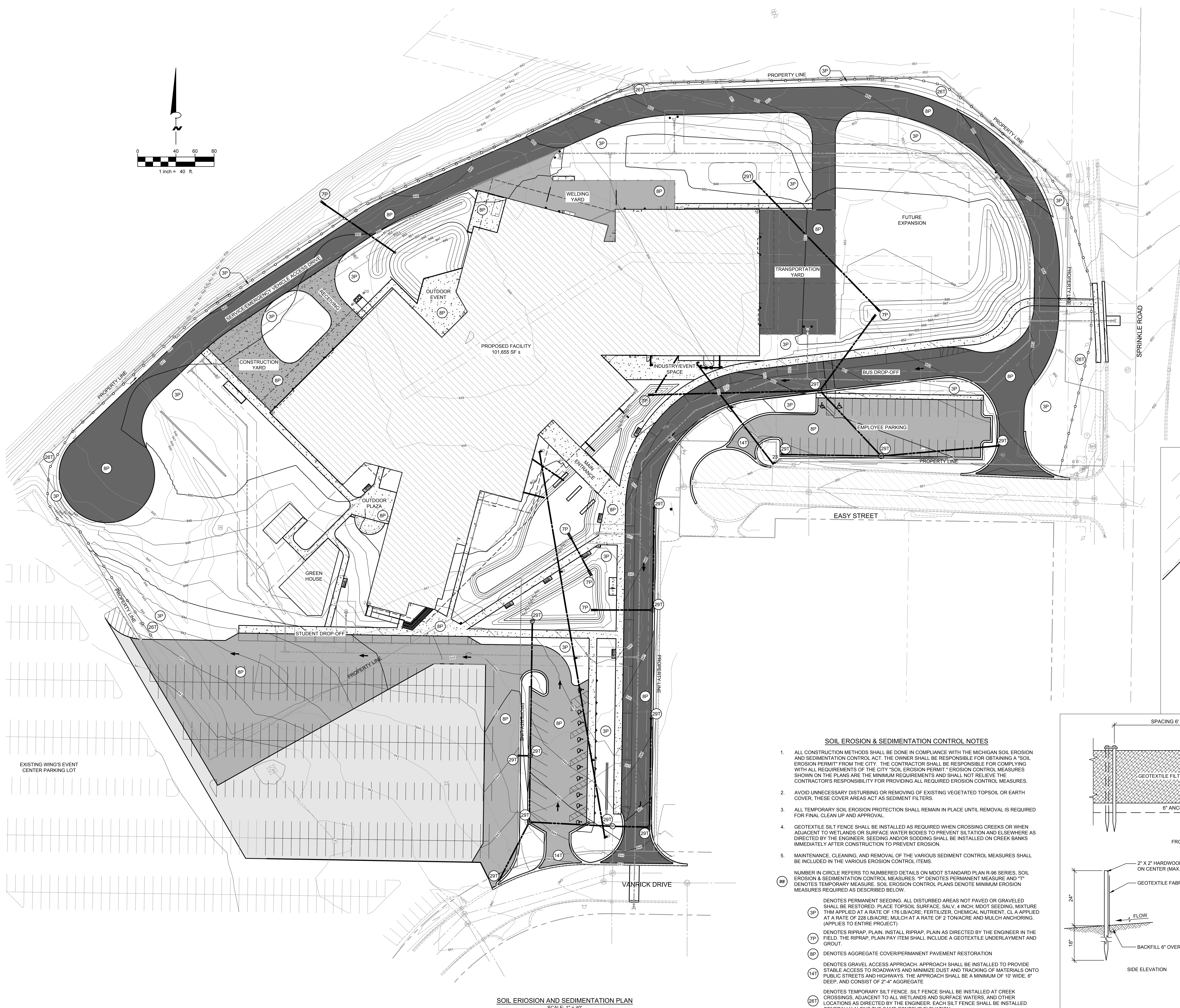
DATE: JULY 2022
SCALE: 1" = 40'

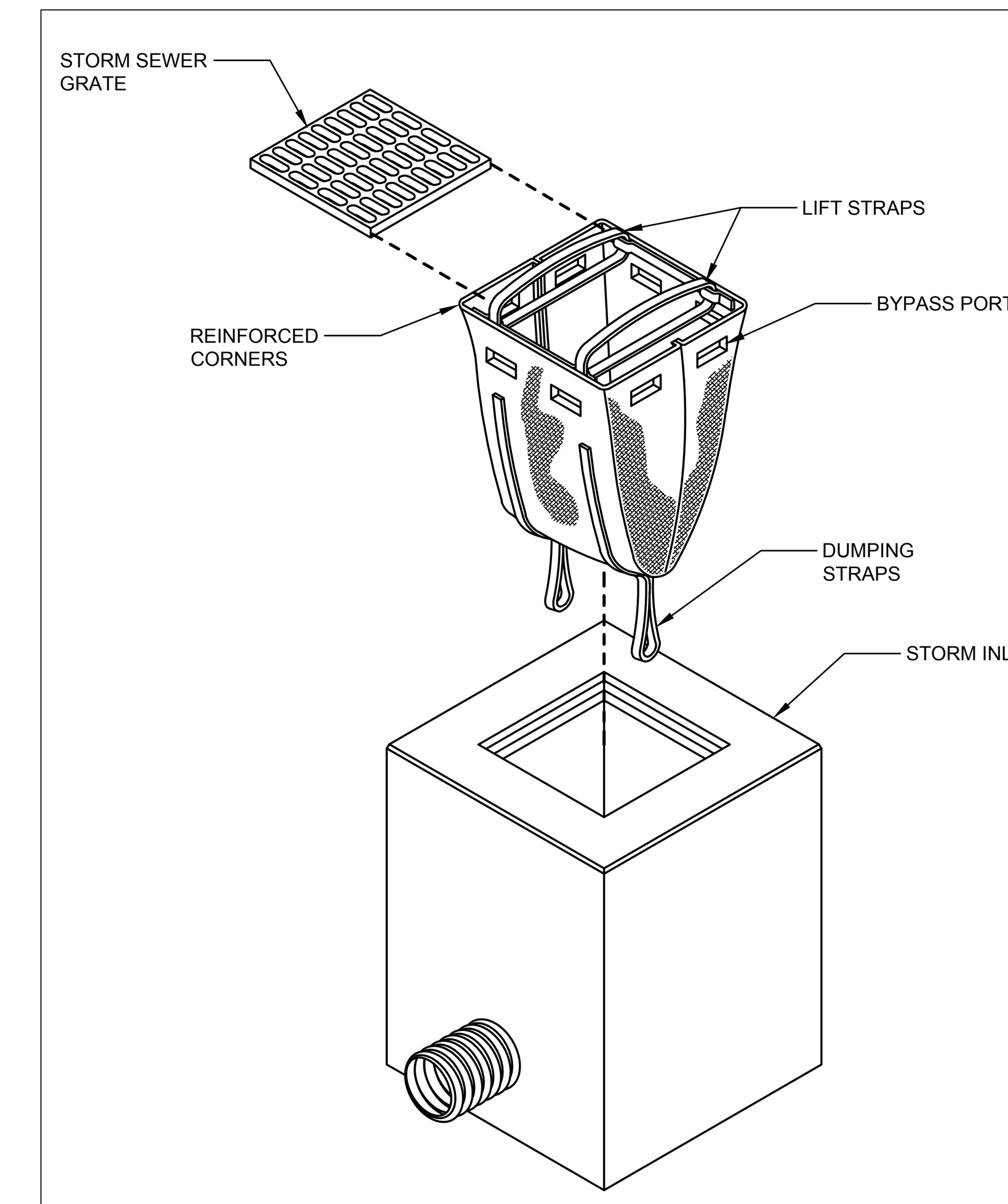
ALTERNATE GRADING PLAN OVERALL

JOB No. 214175

C2.5

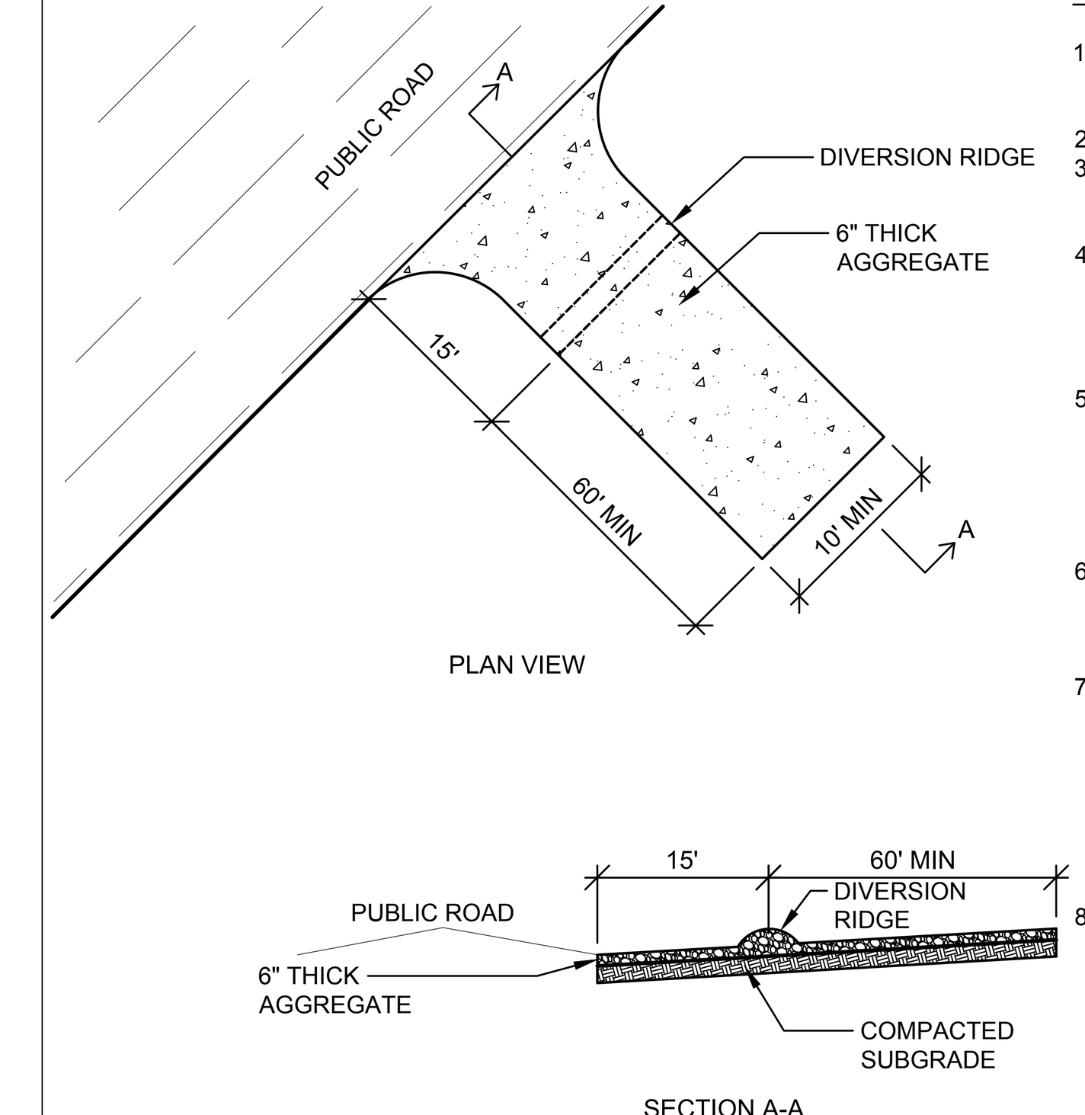


SOIL ERIOSION AND SEDIMENTATION PLAN
SCALE: 1" = 40'



NOTES:
REMOVE INLET PROTECTION WHEN THE CONTRIBUTING DRAINAGE AREAS HAVE BEEN STABILIZED.

INLET PROTECTION DETAIL
SCALE: NONE



NOTES

1. UTILIZE EXISTING DRIVEWAY AND ADD STONE AS REQUIRED WHEN POSSIBLE.
2. COARSE AGGREGATE (2" TO 4" DIA.)
3. PLACE GEOTEXTILE OVER ENTIRE AREA PRIOR TO AGGREGATE PLACEMENT.
4. SURFACE WATER TO BE ROUTED AROUND CONSTRUCTION ENTRANCE WITH CULVERT UNDER ENTRANCE OR MOUNTABLE BERM AROUND ENTRANCE.
5. THE ENTRANCE SHALL BE MAINTAINED TO PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO THE PUBLIC ROAD. PERIODIC PLACEMENT OF ADDITIONAL AGGREGATE MAY BE REQUIRED.
6. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC ROAD SHALL BE REMOVED IMMEDIATELY.
7. WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTERING PUBLIC ROADS. IF WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.
8. PROVIDE PERIODIC INSPECTION AND MAINTENANCE, INCLUDING AFTER EACH RAIN EVENT.

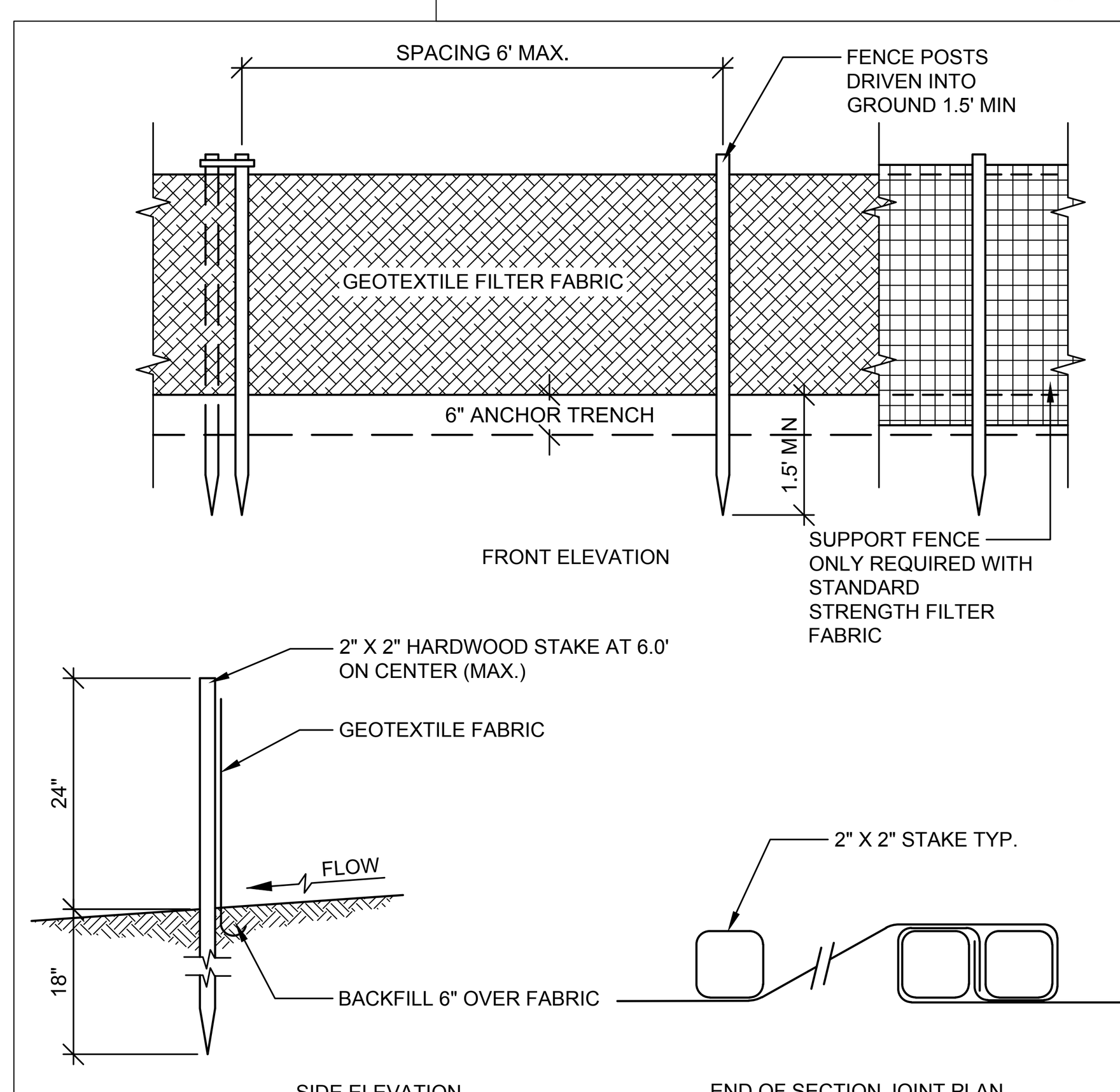
TEMPORARY CONSTRUCTION ENTRANCE
SCALE: NONE

SOIL EROSION & SEDIMENTATION CONTROL NOTES

1. ALL CONSTRUCTION METHODS SHALL BE DONE IN COMPLIANCE WITH THE MICHIGAN SOIL EROSION AND SEDIMENTATION CONTROL ACT. THE OWNER SHALL BE RESPONSIBLE FOR OBTAINING A "SOIL EROSION PERMIT" FROM THE CITY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLYING WITH ALL REQUIREMENTS OF THE CITY "SOIL EROSION PERMIT." EROSION CONTROL MEASURES SHOWN ON THE PLANS ARE THE MINIMUM REQUIREMENTS AND SHALL NOT RELIEVE THE CONTRACTOR'S RESPONSIBILITY FOR PROVIDING ALL REQUIRED EROSION CONTROL MEASURES.
2. AVOID UNNECESSARY DISTURBING OR REMOVING OF EXISTING VEGETATED TOPSOIL OR EARTH COVER, THESE COVER AREAS ACT AS SEDIMENT FILTERS.
3. ALL TEMPORARY SOIL EROSION PROTECTION SHALL REMAIN IN PLACE UNTIL REMOVAL IS REQUIRED FOR FINAL CLEAN UP AND APPROVAL.
4. GEOTEXTILE SILT FENCE SHALL BE INSTALLED AS REQUIRED WHEN CROSSING CREEKS OR WHEN ADJACENT TO WETLANDS OR SURFACE WATER BODIES TO PREVENT SILTATION AND ELSEWHERE AS DIRECTED BY THE ENGINEER. SEEDING AND/OR SODDING SHALL BE INSTALLED ON CREEK BANKS IMMEDIATELY AFTER CONSTRUCTION TO PREVENT EROSION.
5. MAINTENANCE, CLEANING, AND REMOVAL OF THE VARIOUS SEDIMENT CONTROL MEASURES SHALL BE INCLUDED IN THE VARIOUS EROSION CONTROL ITEMS.

(##) NUMBER IN CIRCLE REFERS TO NUMBERED DETAILS ON MDOT STANDARD PLAN R-96 SERIES, SOIL EROSION & SEDIMENTATION CONTROL MEASURES. "P" DENOTES PERMANENT MEASURE AND "T" DENOTES TEMPORARY MEASURE. SOIL EROSION CONTROL PLANS DENOTE MINIMUM EROSION MEASURES REQUIRED AS DESCRIBED BELOW.

- (3P) DENOTES PERMANENT SEEDING. ALL DISTURBED AREAS NOT PAVED OR GRAVELED SHALL BE RESTORED. PLACE TOPSOIL SURFACE, SALV, 4 INCH; MDOT SEEDING, MIXTURE THM APPLIED AT A RATE OF 176 LB/ACRE; FERTILIZER, CHEMICAL NUTRIENT, CL A APPLIED AT A RATE OF 228 LB/ACRE; MULCH AT A RATE OF 2 TON/ACRE AND MULCH ANCHORING. (APPLIES TO ENTIRE PROJECT)
- (7P) DENOTES RIPRAP, PLAIN. INSTALL RIPRAP, PLAIN AS DIRECTED BY THE ENGINEER IN THE FIELD. THE RIPRAP, PLAIN PAY ITEM SHALL INCLUDE A GEOTEXTILE UNDERLAYMENT AND GROUT.
- (8P) DENOTES AGGREGATE COVER/PERMANENT PAVEMENT RESTORATION
- (14T) DENOTES GRAVEL ACCESS APPROACH. APPROACH SHALL BE INSTALLED TO PROVIDE STABLE ACCESS TO ROADWAYS AND MINIMIZE DUST AND TRACKING OF MATERIALS ONTO PUBLIC STREETS AND HIGHWAYS. THE APPROACH SHALL BE A MINIMUM OF 10' WIDE, 6" DEEP, AND CONSIST OF 2"-4" AGGREGATE
- (26T) DENOTES TEMPORARY SILT FENCE. SILT FENCE SHALL BE INSTALLED AT CREEK CROSSINGS, ADJACENT TO ALL WETLANDS AND SURFACE WATERS, AND OTHER LOCATIONS AS DIRECTED BY THE ENGINEER. EACH SILT FENCE SHALL BE INSTALLED GENERALLY ALONG THE SAME CONTOUR ELEVATION.
- (29T) DENOTES INLET PROTECTION FABRIC DROP. SHALL BE INSTALLED AT EXISTING AND PROPOSED STORM SEWER INLETS TO PROVIDE SETTLING AND FILTERING OF SILT LADEN WATER PRIOR TO ENTRY INTO THE DRAINAGE SYSTEM.



SILT FENCE NOTES

1. THE HEIGHT OF SILT FENCE SHALL NOT EXCEED 36 INCHES ABOVE GROUND.
2. THE FILTER FABRIC SHALL BE PURCHASED IN A CONTINUOUS ROLL CUT TO THE LENGTH OF THE BARRIER TO AVOID THE USE OF JOINTS. WHEN JOINTS ARE NECESSARY, FILTER CLOTH SHALL BE SPLICED TOGETHER ONLY AT A SUPPORT POST, WITH A MINIMUM OF A 6 INCH OVERLAP, AND SECURELY SEALED.
3. POSTS SHALL BE SPACED A MAXIMUM OF 6 FEET APART AT THE BARRIER LOCATION AND DRIVEN SECURELY INTO THE GROUND (MINIMUM OF 18 INCHES).
4. A TRENCH SHALL BE EXCAVATED APPROXIMATELY 4-INCHES WIDE AND 4 INCHES DEEP ALONG THE LINE OF POSTS AND UPSLOPE FROM THE BARRIER.
5. WHEN STANDARD STRENGTH FILTER FABRIC IS USED, A WIRE MESH SUPPORT FENCE SHALL BE FASTENED SECURELY TO THE UPSLOPE SIDE OF THE POSTS USING HEAVY DUTY WIRE STAPLES AT LEAST 1-INCH LONG, TIE WIRES OR HOG RINGS. THE WIRE SHALL EXTEND INTO THE TRENCH A MINIMUM OF 2-INCHES.
6. THE STANDARD STRENGTH FILTER FABRIC SHALL BE STAPLED OR WIRED TO THE FENCE, AND 6-INCHES OF THE FABRIC SHALL BE EXTENDED INTO THE TRENCH.
7. FILTER FABRIC SHALL NOT BE STAPLED TO EXISTING TREES.
8. WHEN EXTRA STRENGTH FILTER FABRIC IS USED, THE WIRE MESH SUPPORT FENCE MAY BE ELIMINATED. IN SUCH A CASE, THE FILTER FABRIC IS STAPLED OR WIRED DIRECTLY TO THE POSTS.
9. THE TRENCH SHALL BE BACKFILLED AND SOIL COMPACTED OVER THE FILTER FABRIC.
10. SILT FENCES SHALL BE REMOVED WHEN THEY HAVE SERVED THEIR USEFUL PURPOSE, BUT NOT BEFORE THE UPSLOPE AREA HAS BEEN PERMANENTLY STABILIZED.
11. SILT FENCES AND FILTER BARRIERS SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY REQUIRED REPAIRS SHALL BE MADE IMMEDIATELY.
12. SEDIMENT DEPOSITS SHALL BE REMOVED AFTER EACH STORM EVENT. THEY MUST BE REMOVED WHEN DEPOSITS REACH APPROXIMATELY ONE-HALF THE HEIGHT OF THE BARRIER.
13. SEDIMENT DEPOSITS REMAINING IN PLACE AFTER THE SILT FENCE IS NO LONGER REQUIRED SHALL BE DRESSED TO CONFORM WITH THE EXISTING GRADE, PREPARED AND SEEDED

SEDIMENT CONTROL FENCE
SCALE: NONE

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312.780.1044

IMEG
1100 WARRENVILLE ROAD
SUITE 400W
NAPERVILLE, IL 60563
www.imegcorp.com
630.527.2320

PROJECT NAME:
KALAMAZOO RESA CTE Career & Technical Education

CAREER & TECHNICAL EDUCATION CENTER
VANRICK DRIVE
KALAMAZOO, MI 49001

KALAMAZOO RESA
INSPIRING EDUCATIONAL EXCELLENCE

KALAMAZOO RESA
1819 EAST MILHAM ROAD
PORTAGE, MI 49002

02	8/10/2022	ISSUED FOR SITE PLAN REVIEW	PDS
01	8/1/2022	ISSUED FOR BIDDING	PDS

REVISIONS

DATE: JULY 2022
SCALE: 1" = 40'

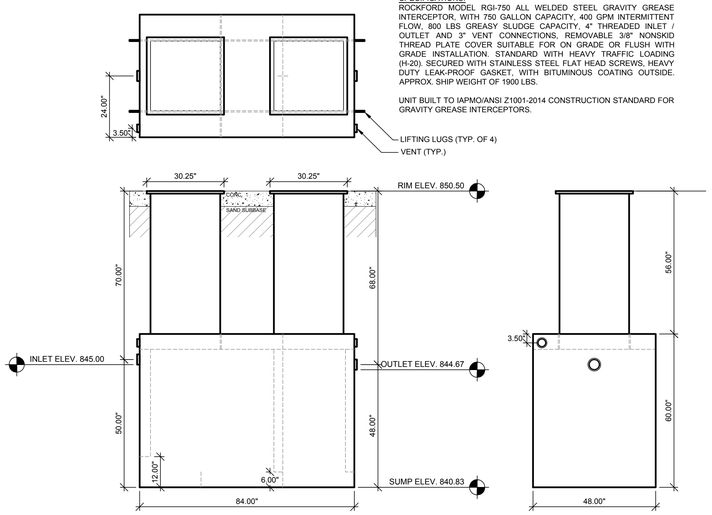
SOIL EROSION AND SEDIMENTATION CONTROL PLAN

JOB No. 214175

C3.1

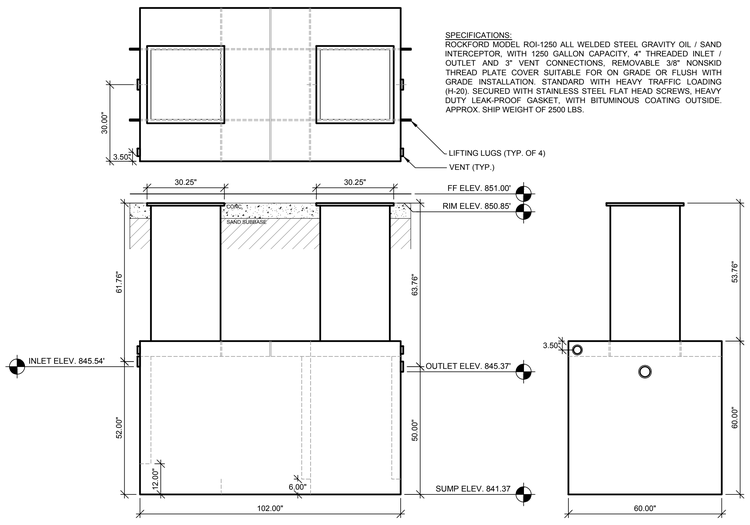
SPECIFICATIONS:
ROCKFORD MODEL RGI-750 ALL WELDED STEEL GRAVITY GREASE INTERCEPTOR, WITH 750 GALLON CAPACITY, 400 GPM INTERMITTENT FLOW, 800 LBS GREASY SLUDGE CAPACITY, 4" THREADED INLET / OUTLET AND 3" VENT CONNECTIONS, REMOVABLE 3/8" NONSKID THREAD PLATE COVER SUITABLE FOR ON GRADE OR FLUSH WITH GRADE INSTALLATION. STANDARD WITH HEAVY TRAFFIC LOADING (H-20). SECURED WITH STAINLESS STEEL FLAT HEAD SCREWS, HEAVY DUTY LEAK-PROOF GASKET, WITH BITUMINOUS COATING OUTSIDE. APPROX. SHIP WEIGHT OF 1900 LBS.

UNIT BUILT TO IAPMO/ANSI Z1001-2014 CONSTRUCTION STANDARD FOR GRAVITY GREASE INTERCEPTORS.



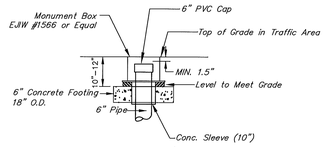
DETAIL - GREASE INTERCEPTOR
SCALE: 1" = 2'

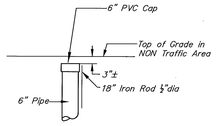
SPECIFICATIONS:
ROCKFORD MODEL ROI-1250 ALL WELDED STEEL GRAVITY OIL / SAND INTERCEPTOR, WITH 1250 GALLON CAPACITY, 4" THREADED INLET / OUTLET AND 3" VENT CONNECTIONS, REMOVABLE 3/8" NONSKID THREAD PLATE COVER SUITABLE FOR ON GRADE OR FLUSH WITH GRADE INSTALLATION. STANDARD WITH HEAVY TRAFFIC LOADING (H-20). SECURED WITH STAINLESS STEEL FLAT HEAD SCREWS, HEAVY DUTY LEAK-PROOF GASKET, WITH BITUMINOUS COATING OUTSIDE. APPROX. SHIP WEIGHT OF 2500 LBS.



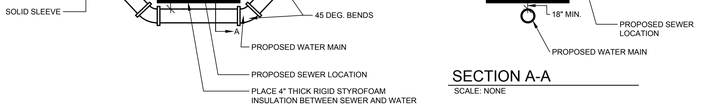
DETAIL - OIL AND SAND INTERCEPTOR
SCALE: 1" = 2'

Site Plan Review
City of Kalamazoo
08/10/2022



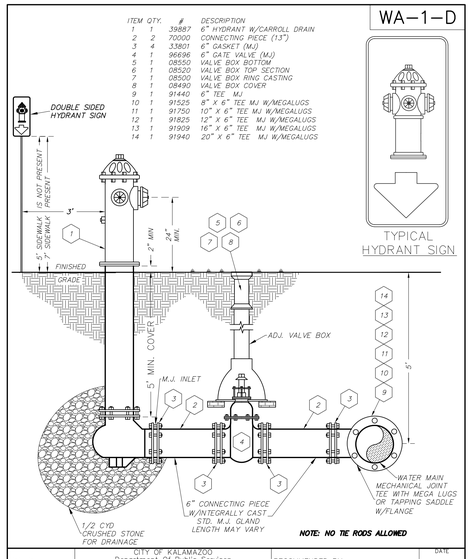


DETAIL - CLEANOUT
SCALE: NTS



SECTION A-A
SCALE: NONE

DETAIL - WATER MAIN INSULATION
SCALE: NTS



CITY OF KALAMAZOO
Department Of Public Services

TYPICAL FIRE HYDRANT & GATE VALVE DETAIL

RECOMMENDED BY _____ DATE
APPROVED BY _____
APPROVED BY _____
ACCEPTED BY _____

NOTES:
BACKFILLING SHALL BE ACCORDING TO THE STANDARD SPECIFICATION.

SUFFICIENT TRENCH WIDTH SHALL BE PROVIDED TO ALLOW FREE WORKING SPACE AND TO PERMIT COMPACTING THE BACKFILL AROUND THE PIPE.

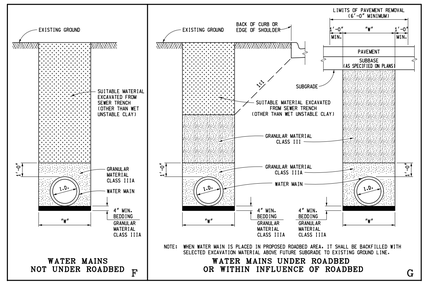
THE FOLLOWING ARE MINIMUM TRENCH WIDTHS:

I.D. PIPE SIZE (INCHES)	LESS THAN 18	21	24	30	36
TRENCH WIDTH (FEET)	3-0	3.5	4.0	5-0	6-0

I.D. PIPE SIZE (INCHES)	42	48	54	60	66	72
TRENCH WIDTH (FEET)	7-0	8-0	9-5	10-0	10-5	11-0

I.D. PIPE SIZE (INCHES)	78	84	90	96	102	108
TRENCH WIDTH (FEET)	11-5	12-0	12-5	13-0	13-5	14-0

ESTIMATED PAVEMENT REMOVAL WIDTH IS TO BE TRENCH WIDTH "W" PLUS 1'-0" EACH SIDE OF THE TRENCH (6'-0" MINIMUM).



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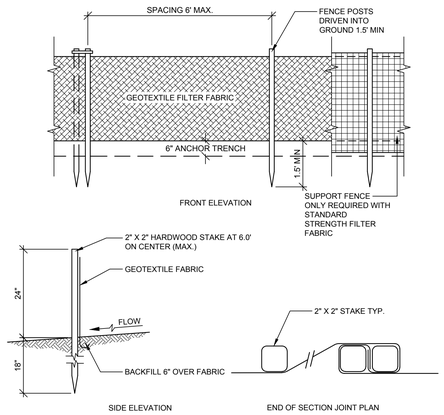
ISSUED FOR BIDDING

REVISIONS

DATE: JULY 2022
SCALE: VARIES

SITE IMPROVEMENT DETAILS

JOB No. 214175
C5.1

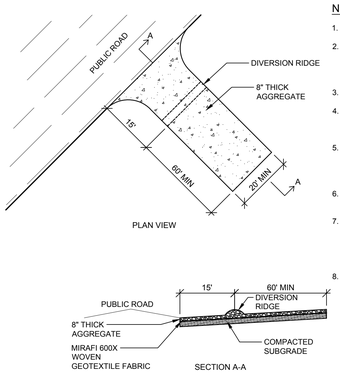


SILT FENCE NOTES

1. THE HEIGHT OF SILT FENCE SHALL NOT EXCEED 36 INCHES ABOVE GROUND.
2. THE FILTER FABRIC SHALL BE PURCHASED IN A CONTINUOUS ROLL CUT TO THE LENGTH OF THE BARRIER TO AVOID THE USE OF JOINTS. WHEN JOINTS ARE NECESSARY, FILTER CLOTH SHALL BE SPLICED TOGETHER ONLY AT A SUPPORT POST, WITH A MINIMUM OF A 6 INCH OVERLAP, AND SECURELY SEALED.
3. POSTS SHALL BE SPACED A MAXIMUM OF 6 FEET APART AT THE BARRIER LOCATION AND DRIVEN SECURELY INTO THE GROUND (MINIMUM OF 18 INCHES).
4. A TRENCH SHALL BE EXCAVATED APPROXIMATELY 4-INCHES WIDE AND 4 INCHES DEEP ALONG THE LINE OF POSTS AND UPSLOPE FROM THE BARRIER.
5. WHEN STANDARD STRENGTH FILTER FABRIC IS USED, A WIRE MESH SUPPORT FENCE SHALL BE FASTENED SECURELY TO THE UPSLOPE SIDE OF THE POSTS USING HEAVY DUTY WIRE STAPLES AT LEAST 1-INCH LONG, TIE WIRES OR HOG RINGS. THE WIRE SHALL EXTEND INTO THE TRENCH A MINIMUM OF 2-INCHES.
6. THE STANDARD STRENGTH FILTER FABRIC SHALL BE STAPLED OR WIRED TO THE FENCE, AND 6-INCHES OF THE FABRIC SHALL BE EXTENDED INTO THE TRENCH.
7. FILTER FABRIC SHALL NOT BE STAPLED TO EXISTING TREES.
8. WHEN EXTRA STRENGTH FILTER FABRIC IS USED, THE WIRE MESH SUPPORT FENCE MAY BE ELIMINATED. IN SUCH A CASE, THE FILTER FABRIC IS STAPLED OR WIRED DIRECTLY TO THE POSTS.
9. THE TRENCH SHALL BE BACKFILLED AND SOIL COMPACTED OVER THE FILTER FABRIC.
10. SILT FENCES SHALL BE REMOVED WHEN THEY HAVE SERVED THEIR USEFUL PURPOSE, BUT NOT BEFORE THE UPSLOPE AREA HAS BEEN PERMANENTLY STABILIZED.
11. SILT FENCES AND FILTER BARRIERS SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY REQUIRED REPAIRS SHALL BE MADE IMMEDIATELY.
12. SEDIMENT DEPOSITS SHALL BE REMOVED AFTER EACH STORM EVENT. THEY MUST BE REMOVED WHEN DEPOSITS REACH APPROXIMATELY ONE-HALF THE HEIGHT OF THE BARRIER.
13. SEDIMENT DEPOSITS REMAINING IN PLACE AFTER THE SILT FENCE IS NO LONGER REQUIRED SHALL BE DRESSED TO CONFORM WITH THE EXISTING GRADE, PREPARED AND SEEDED

SEDIMENT CONTROL FENCE

SCALE: NONE

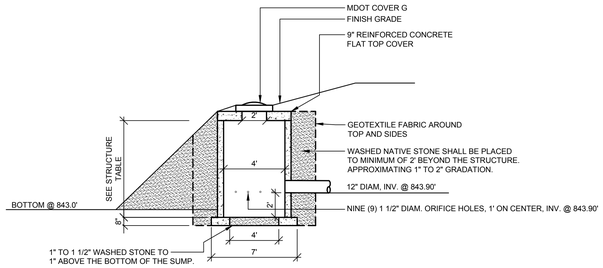


NOTES

1. UTILIZE EXISTING DRIVEWAY AND ADD STONE AS REQUIRED WHEN POSSIBLE.
2. ACCEPTABLE AGGREGATE
   a. ASTM D48 SIZE #1 (2" TO 3" DIA.)
   b. INDOT COURSE AGGREGATE NO. 2
   c. MDOT COARSE AGGREGATE 3x1 (3/4" TO 3" DIA.)
3. PLACE GEOTEXTILE OVER ENTIRE AREA PRIOR TO AGGREGATE PLACEMENT.
4. SURFACE WATER TO BE ROUTED AROUND CONSTRUCTION ENTRANCE WITH CULVERT UNDER ENTRANCE OR MOUNTABLE BERM AROUND ENTRANCE.
5. THE ENTRANCE SHALL BE MAINTAINED TO PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO THE PUBLIC ROAD. PERIODIC PLACEMENT OF ADDITIONAL AGGREGATE MAY BE REQUIRED.
6. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC ROAD SHALL BE REMOVED IMMEDIATELY.
7. WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTERING PUBLIC ROADS. IF WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.
8. PROVIDE PERIODIC INSPECTION AND MAINTENANCE, INCLUDING AFTER EACH RAIN EVENT.

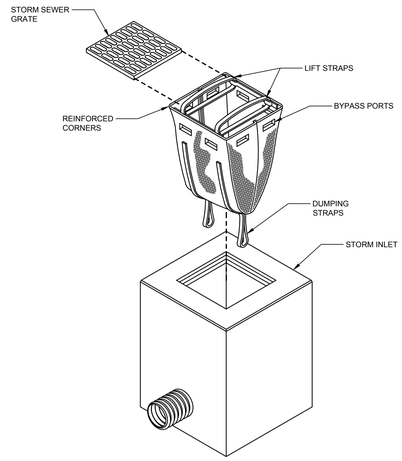
TEMPORARY CONSTRUCTION ENTRANCE

SCALE: NONE



OUTLET CONTROL STRUCTURE DETAIL

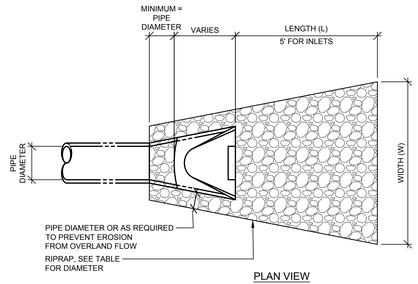
SCALE: NONE



NOTES:
REMOVE INLET PROTECTION WHEN THE CONTRIBUTING DRAINAGE AREAS HAVE BEEN STABILIZED.

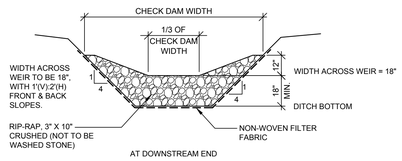
INLET PROTECTION DETAIL

SCALE: NONE



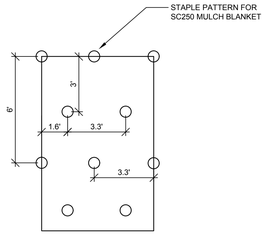
PLAN VIEW

RIPRAP TABLE			
PIPE DIA	LENGTH (FT)	WIDTH (FT)	RIPRAP Ø (IN)
12" 15" 18	5'	8'	8" - 16" (PLAIN)
24" 30" 36"	10'	14'	8" - 16" (PLAIN)
42" 48" 54" 60"	15'	20'	GREATER THAN 16" (HEAVY)



PERMANENT ROCK CHECK DAM

SCALE: NONE



1.15 STAPLES PER SQ. YD.

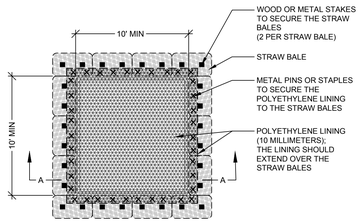
MULCH BLANKET STAPLE PATTERN

SCALE: NONE

SECTION VIEW

TYPICAL END SECTION DETAIL

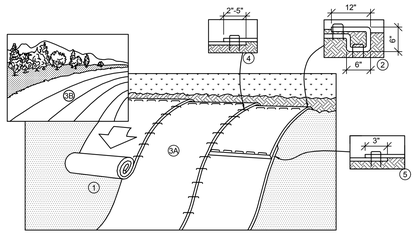
SCALE: NONE



1. CONCRETE WASHOUT SYSTEM WILL CONTAIN WASHOUT WATER WHEN CHUTES & HOPPERS ARE RINSED FOLLOWING CONCRETE DELIVERY TO THE CONSTRUCTION SITE.
2. SCRAP AS MUCH MATERIAL FROM CHUTES AS POSSIBLE BEFORE WASHING THEM. USE NON-WATER CLEANING METHODS TO MINIMIZE THE CHANCE FOR WASTE TO FLOW OFF SITE.
3. DO NOT BACK FLUSH EQUIPMENT AT THE PROJECT SITE. IT SHOULD BE RESTRICTED TO PLANT.
4. DO NOT USE ADDITIVES WITH WASH WATER. DO NOT USE ACID OR SOLVENTS.
5. FURNISH A SIGNAGE FOR THE CONCRETE WASHOUT AREA.
6. FURNISH ORANGE SAFETY FENCING OR EQUAL.

CONCRETE WASHOUT DETAIL

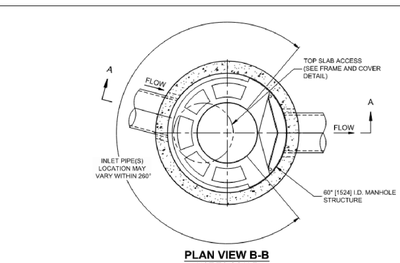
SCALE: NONE



1. PREPARE SOIL BEFORE INSTALLING ROLLED EROSION CONTROL PRODUCTS (RECP's) WITH TOPSOIL AND FERTILIZER PER RESTORATION AND SEEDING NOTES, AND AEP STANDARD SPECIFICATION SS-160102.
2. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE RECP's IN A 6" DEEP X 6" WIDE TRENCH WITH APPROXIMATELY 12" OF RECP's EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE RECP's WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" APART IN THE BOTTOM OF THE TRENCH, BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" PORTION OF RECP's BACK OVER SEED AND COMPACTED SOIL. SECURE RECP's OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" APART ACROSS THE WIDTH OF THE RECP's.
3. ROLL THE RECP's (A.) DOWN OR (B.) HORIZONTALLY ACROSS THE SLOPE. RECP's WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL RECP's MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE. WHEN USING THE DOT SYSTEM , STAPLES/STAKES SHOULD BE PLACED THROUGH EACH OF THE COLORED DOTS CORRESPONDING TO THE APPROPRIATE STAPLE PATTERN.
4. THE EDGES OF PARALLEL RECP's MUST BE STAPLED WITH APPROXIMATELY 2" - 5" OVERLAP DEPENDING ON RECP's TYPE.
5. CONSECUTIVE RECP's SPLICED DOWN THE SLOPE MUST BE PLACED END OVER END (SHINGLE STYLE) WITH AN APPROXIMATE 3" OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" APART ACROSS ENTIRE RECP's WIDTH. NOTE: "IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" MAY BE NECESSARY TO PROPERLY SECURE THE RECP's.

MULCH BLANKET SLOPE PATTERN

SCALE: NONE



CASCADE separator™

CASCADE SEPARATOR DESIGN NOTES
THE STANDARD CS-5 CONFIGURATION IS SHOWN. ALTERNATE CONFIGURATIONS ARE AVAILABLE AND ARE LISTED BELOW. SOME CONFIGURATIONS MAY BE COMBINED TO SUIT SITE REQUIREMENTS.
CONFIGURATION DESCRIPTION
GRATED INLET ONLY (NO INLET PIPE)
GRATED INLET WITH INLET PIPE OR PIPES
CURB INLET ONLY (NO INLET PIPE)
CURB INLET WITH INLET PIPE OR PIPES

SITE SPECIFIC DATA REQUIREMENTS			
STRUCTURE ID			ST14
WATER QUALITY FLOW RATE (cfs [L/s])			0.88
PEAK FLOW RATE (cfs [L/s])			2.81
RETURN PERIOD OF PEAK FLOW (yrs)			1, 30 MIN
RIM ELEVATION			845.21
PIPE DATA:	INVERT	MATERIAL	DIAMETER
INLET PIPE 1	838.89	HPDE	12"
INLET PIPE 2	838.89	HPDE	12"
OUTLET PIPE	838.89	HPDE	12"
NOTES / SPECIAL REQUIREMENTS:			

FRAME AND COVER
(DIAMETER VARIES)
NOT TO SCALE

GENERAL NOTES
1. CONTECH TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE.
2. FOR SITE SPECIFIC DRAWINGS WITH DETAILED STRUCTURE DIMENSIONS AND WEIGHT, PLEASE CONTACT YOUR CONTECH ENGINEERED SOLUTIONS LLC REPRESENTATIVE. www.ContechES.com
3. CASCADE SEPARATOR WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING. CONTRACTOR TO CONFIRM STRUCTURE MEETS REQUIREMENTS OF PROJECT.
4. CASCADE SEPARATOR STRUCTURE SHALL MEET AASHTO H520 LOAD RATING, ASSUMING EARTH COVER OF 0' - 2' [610], AND GROUNDWATER ELEVATION AT, OR BELOW, THE OUTLET PIPE INVERT ELEVATION. ENGINEER OF RECORD TO CONFIRM ACTUAL GROUNDWATER ELEVATION. CASTINGS SHALL MEET AASHTO M306 AND BE CAST WITH THE CONTECH LOGO.
5. CASCADE SEPARATOR STRUCTURE SHALL BE PRECAST CONCRETE CONFORMING TO ASTM C478 AND AASHTO LOAD FACTOR DESIGN METHOD.
6. ALTERNATE UNITS ARE SHOWN IN MILLIMETERS [mm].

INSTALLATION NOTES
A. ANY SUB-BASE, BACKFILL DEPTH, AND/OR ANTI-FLOTATION PROVISIONS ARE SITE-SPECIFIC DESIGN CONSIDERATIONS AND SHALL BE SPECIFIED BY ENGINEER OF RECORD.
B. CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE CASCADE SEPARATOR MANHOLE STRUCTURE.
C. CONTRACTOR TO INSTALL JOINT SEALANT BETWEEN ALL STRUCTURE SECTIONS AND ASSEMBLE STRUCTURE.
D. CONTRACTOR TO PROVIDE, INSTALL, AND GROUT INLET AND OUTLET PIPE(S). MATCH PIPE INVERTS WITH ELEVATIONS SHOWN. ALL PIPE CENTERLINES TO MATCH PIPE OPENING CENTERLINES.
E. CONTRACTOR TO TAKE APPROPRIATE MEASURES TO ASSURE UNIT IS WATER TIGHT, HOLDING WATER TO FLOWLINE INVERT MINIMUM. IT IS SUGGESTED THAT ALL JOINTS BELOW PIPE INVERTS ARE GROUTED.

CONTECH ENGINEERED SOLUTIONS LLC
www.contechES.com
9025 Centre Pointe Dr., Suite 400, West Chester, OH 45069
800-338-1122 513-645-7000 513-645-7993 FAX

CS-5
CASCADE SEPARATOR
STANDARD DETAIL

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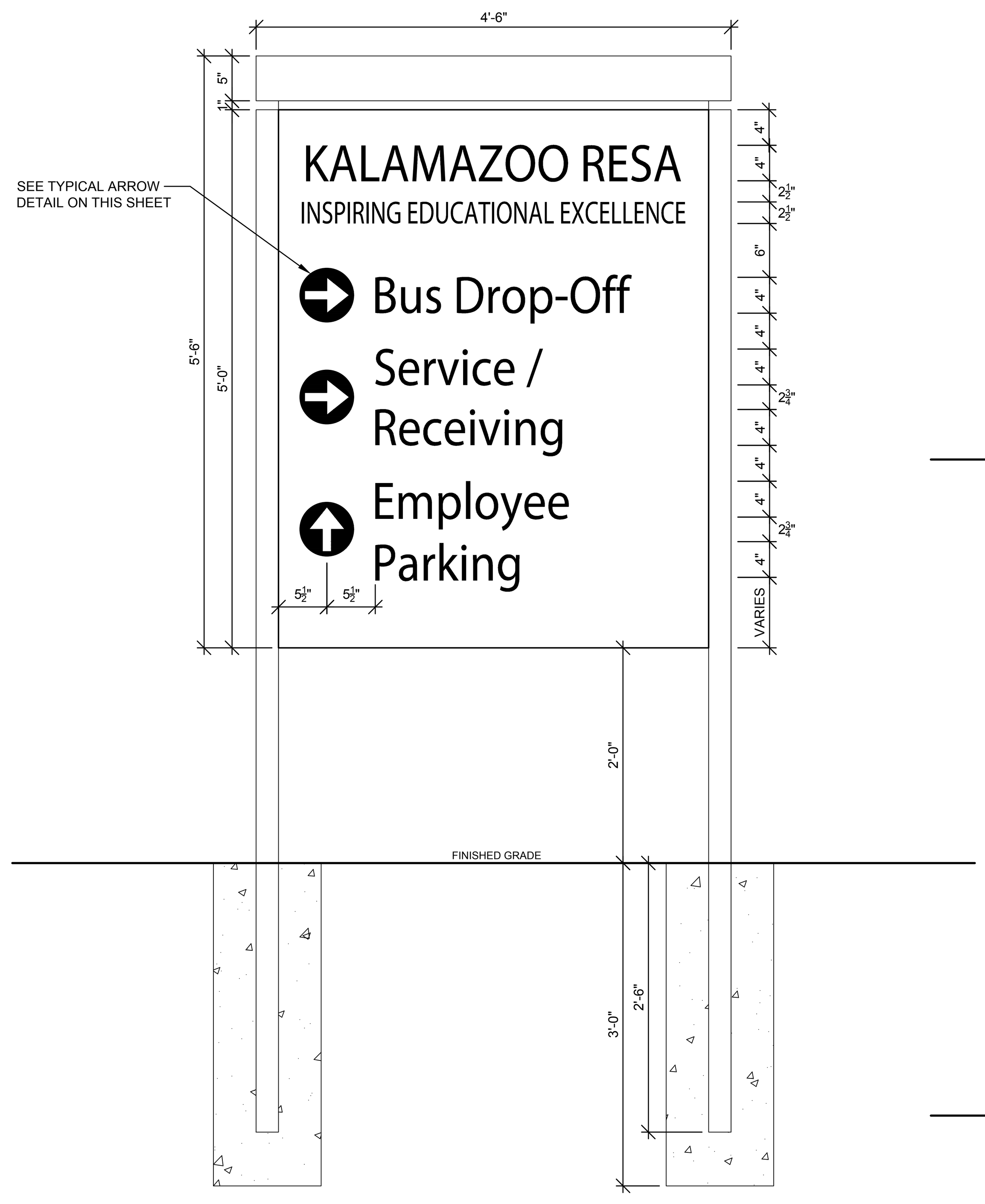
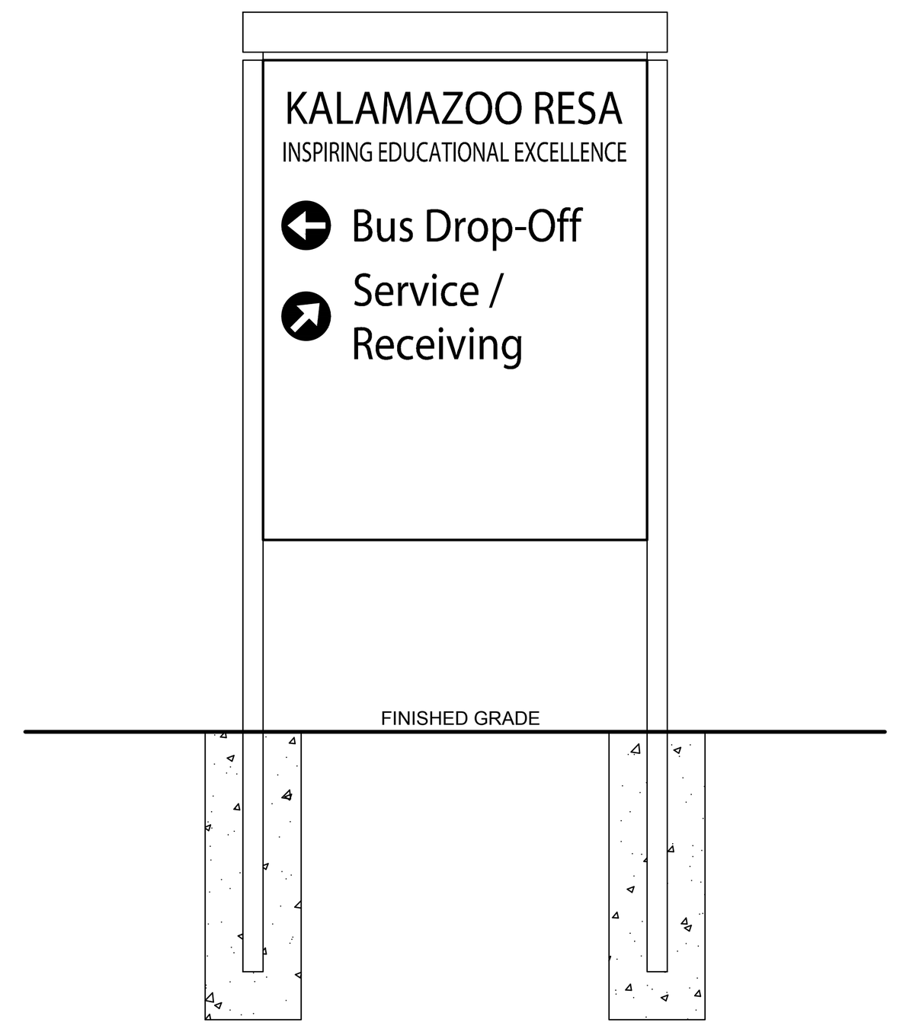
SITE IMPROVEMENT DETAILS

JOB No. 214175

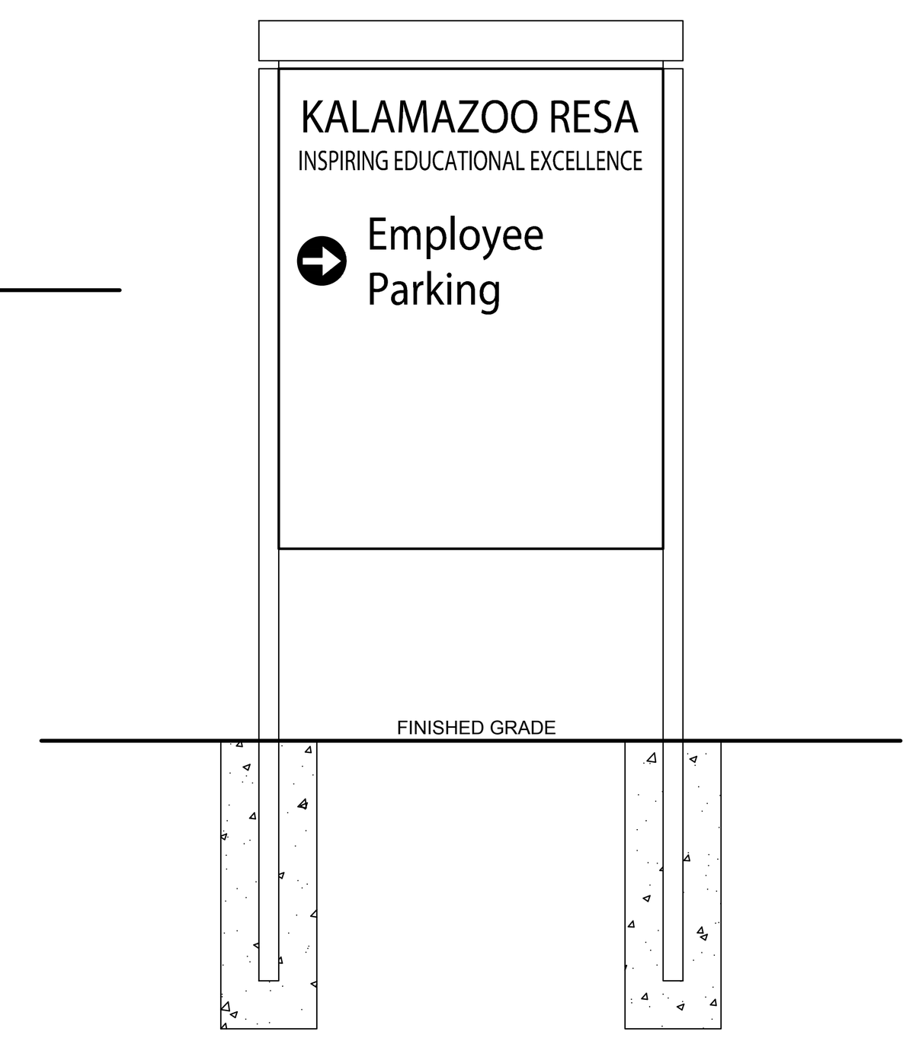
C5.2



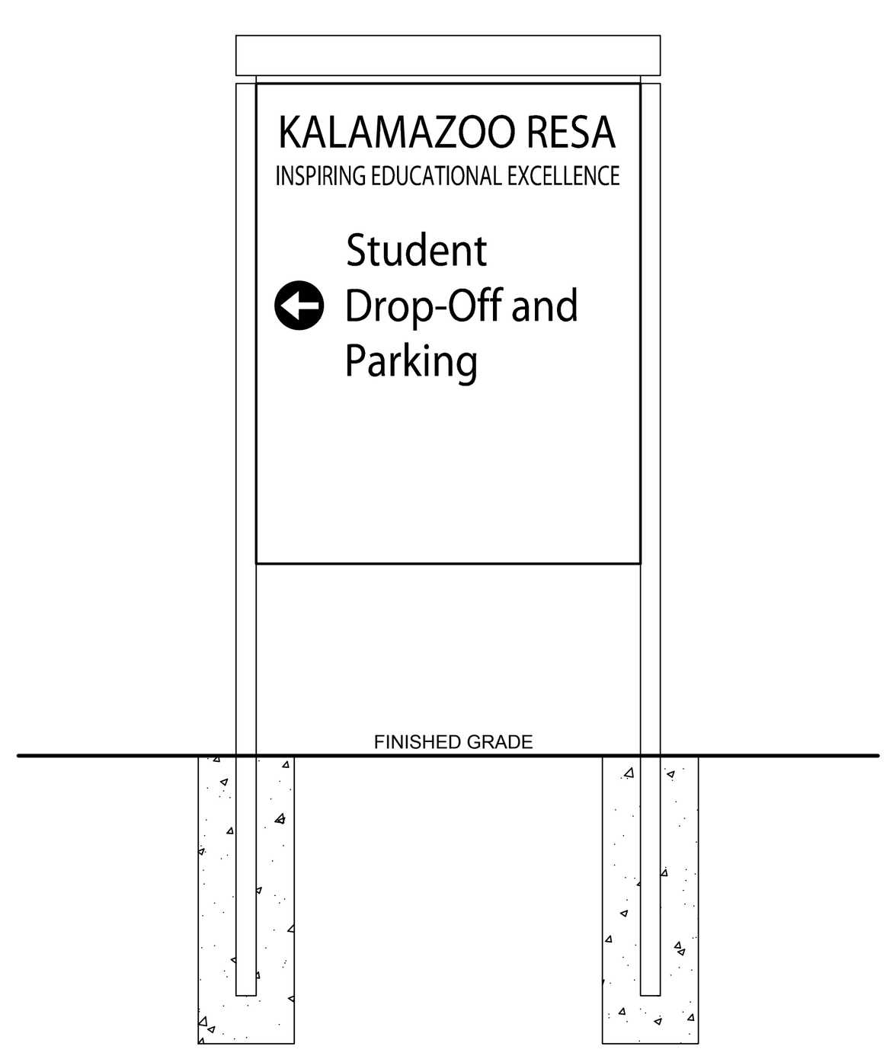
DIRECTIONAL SIGN DETAIL S1
SCALE: 1" = 1'
NOTE: SPACING AND DIMENSIONS SHOWN ABOVE IS TYPICAL FOR ALL DIRECTIONAL SIGNS.
DIRECTIONAL SIGNS SHALL MATCH MATERIAL AND COLOR WITH EXISTING KRESA DIRECTIONAL SIGNAGE AT 1819 EAST MILHAM AVENUE.



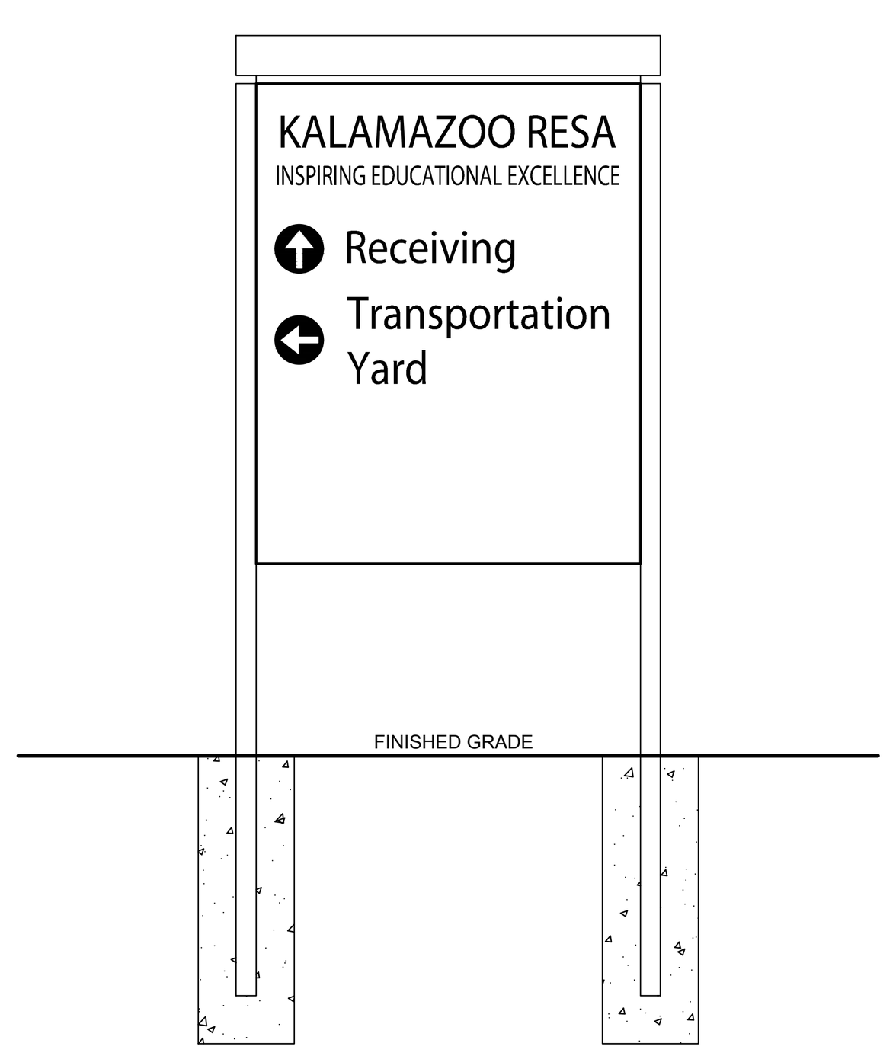
DIRECTIONAL SIGN DETAIL S2
SCALE: 1" = 2'



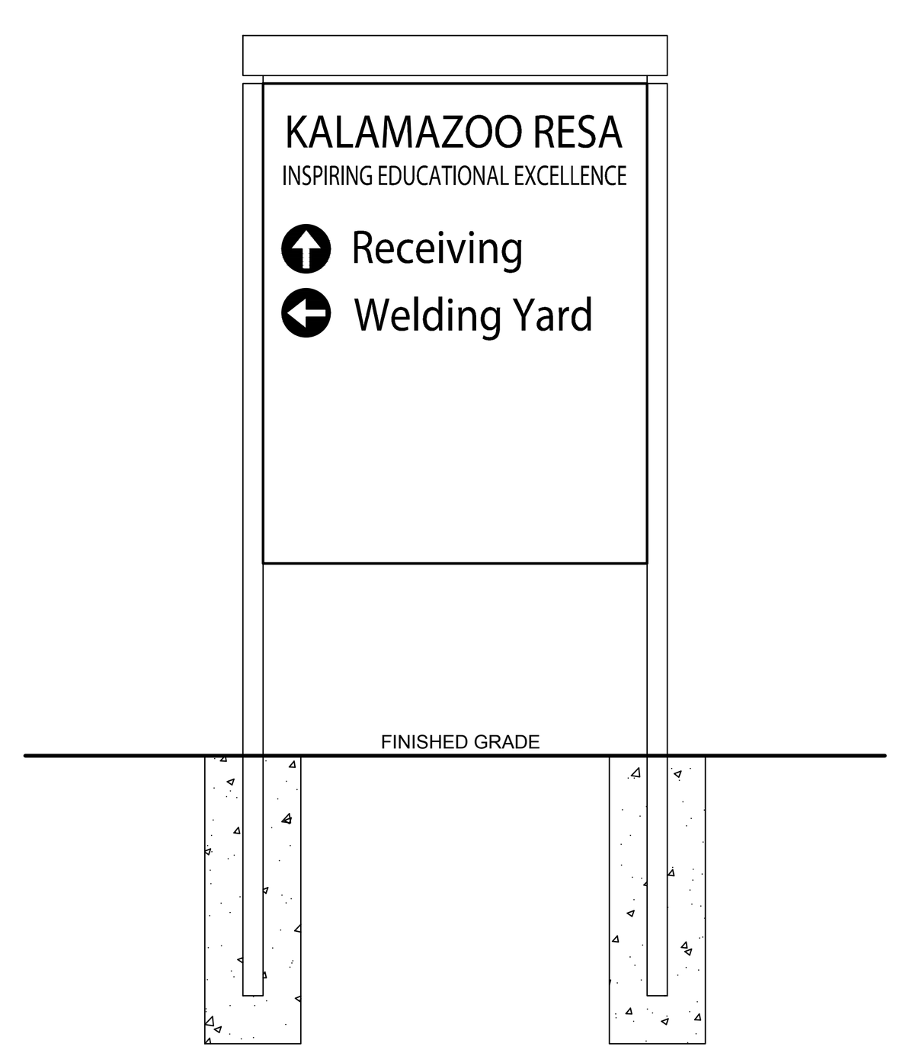
DIRECTIONAL SIGN DETAIL S3
SCALE: 1" = 2'



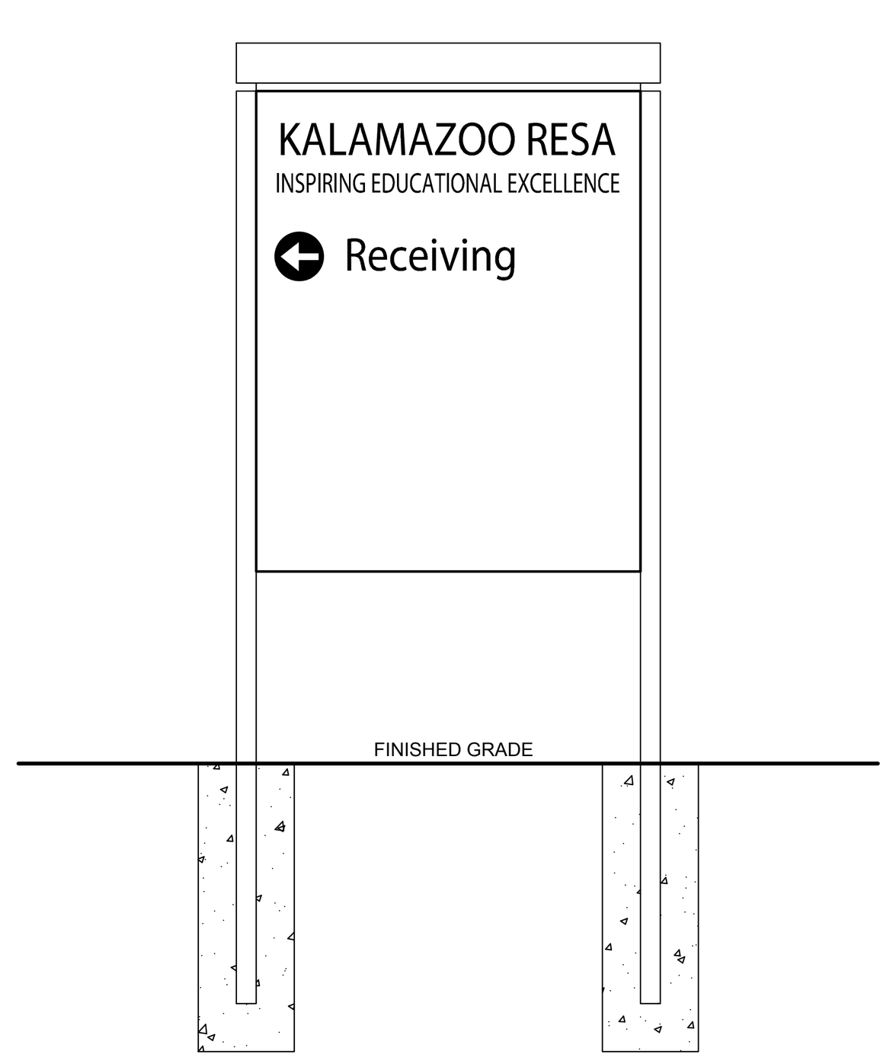
DIRECTIONAL SIGN DETAIL S4
SCALE: 1" = 2'
NOTE: WEST FACE OF SIGN SHOWN ABOVE. EAST FACE TO BE THE SAME AS ABOVE WITH THE EXCEPTION OF THE ARROW SHALL POINT TO THE RIGHT.



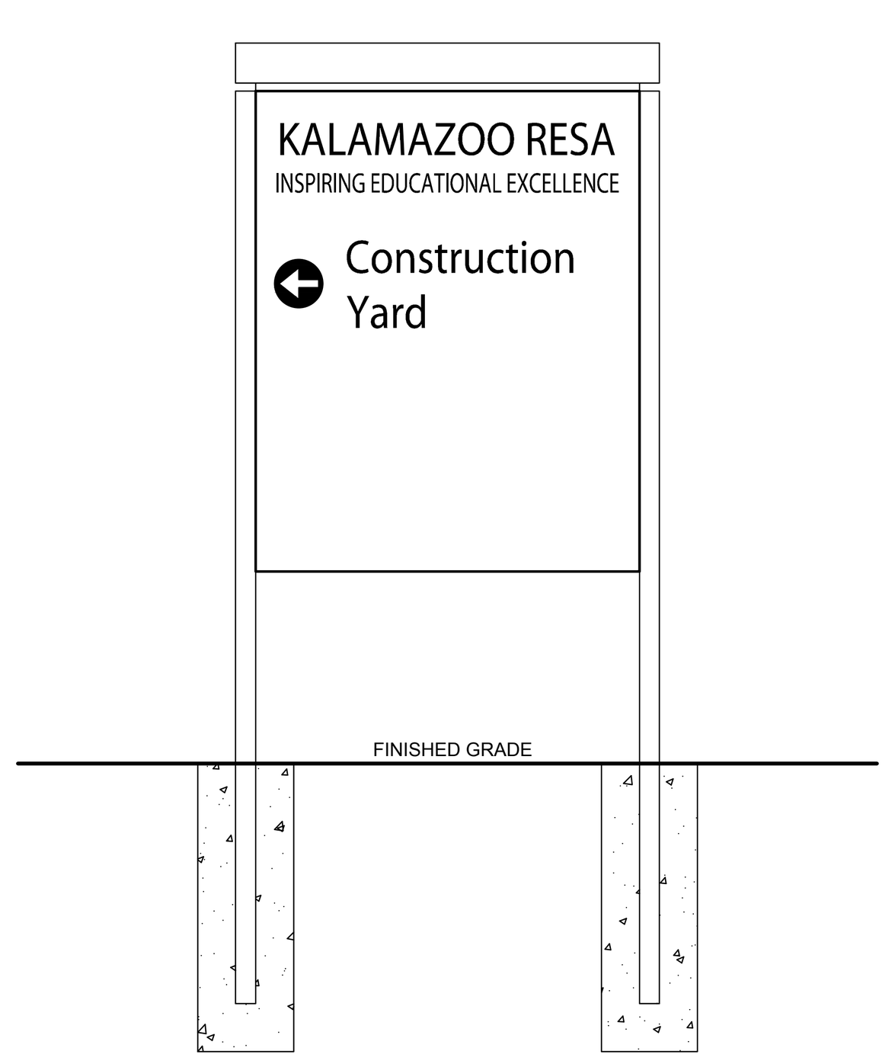
DIRECTIONAL SIGN DETAIL S5
SCALE: 1" = 2'



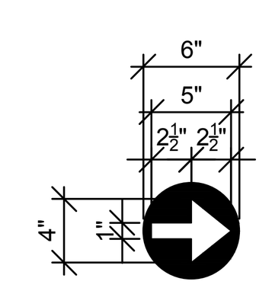
DIRECTIONAL SIGN DETAIL S6
SCALE: 1" = 2'



DIRECTIONAL SIGN DETAIL S7
SCALE: 1" = 2'

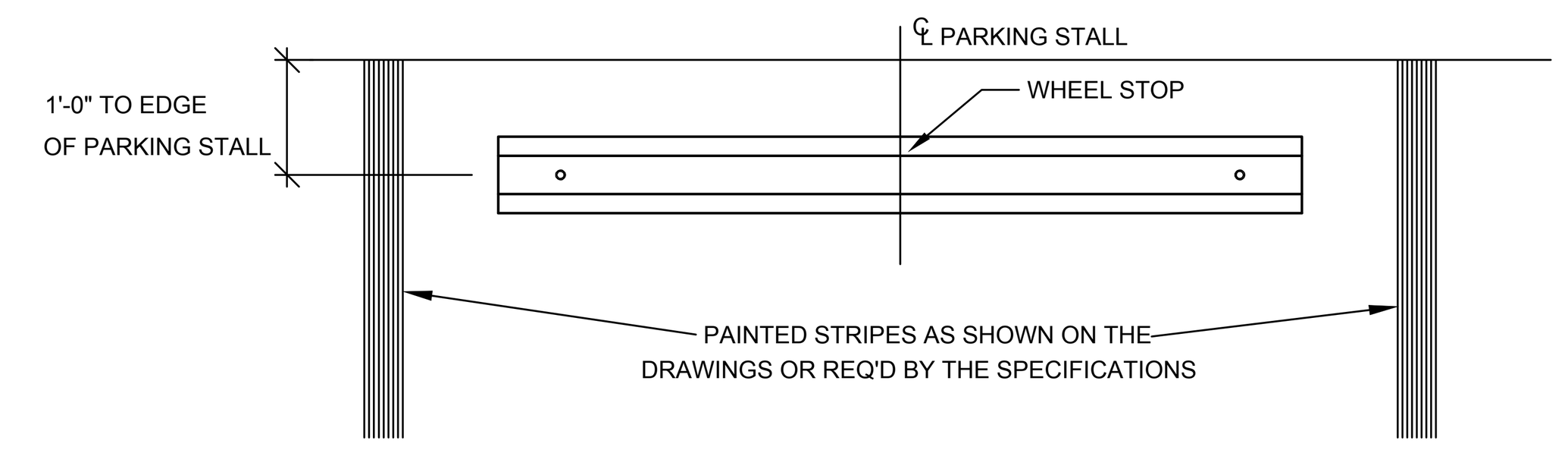


DIRECTIONAL SIGN DETAIL S8
SCALE: 1" = 2'

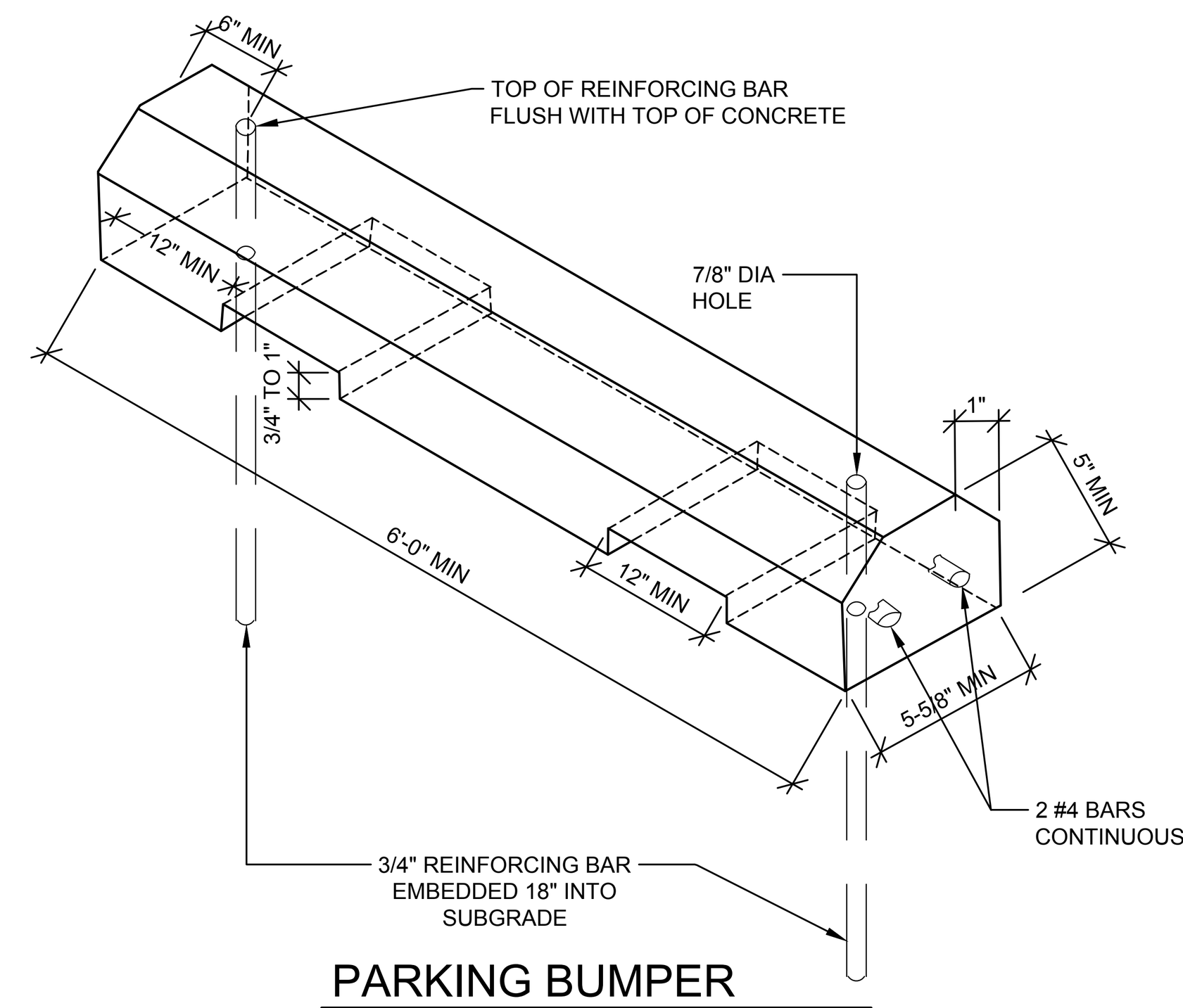


ARROW DETAIL - TYPICAL
SCALE: 1" = 1'

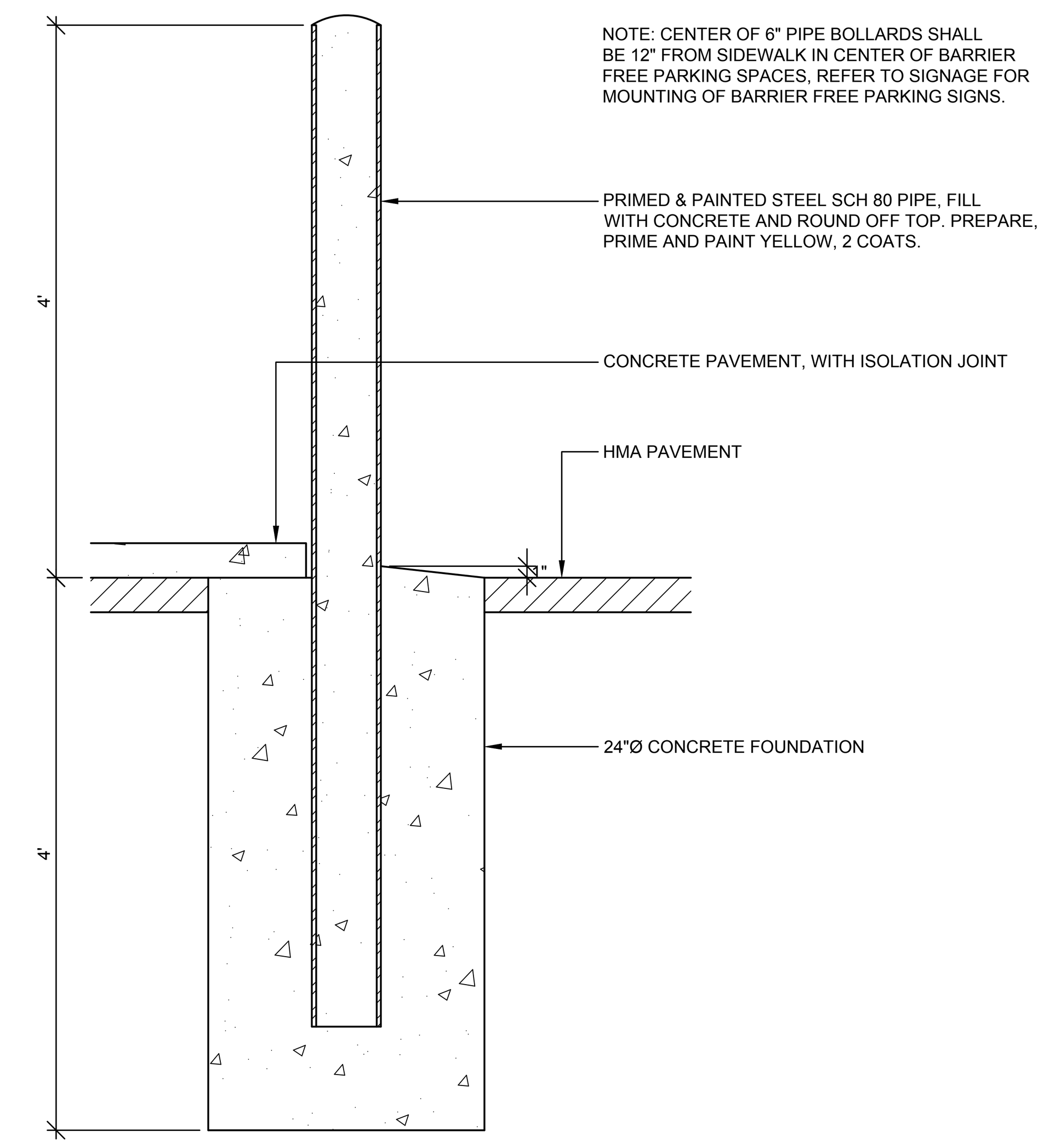
DIRECTIONAL SIGN DETAILS



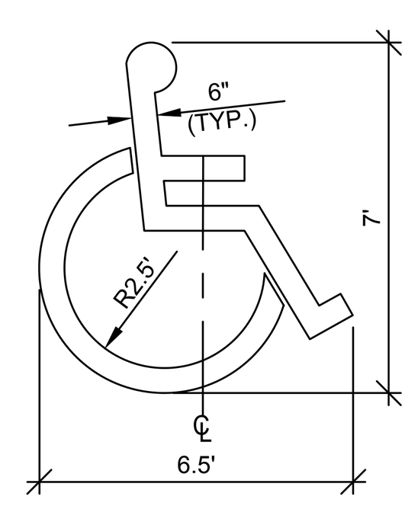
PARKING BUMPER INSTALLATION PLAN
SCALE: NOT TO SCALE



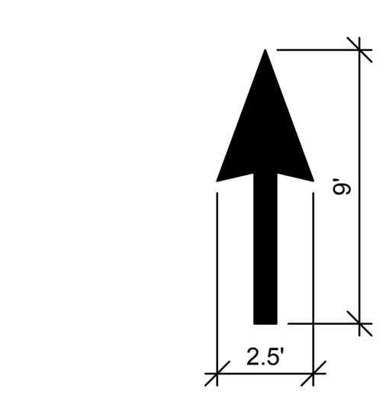
PARKING BUMPER
SCALE: NOT TO SCALE



PIPE BOLLARD DETAIL
NO SCALE

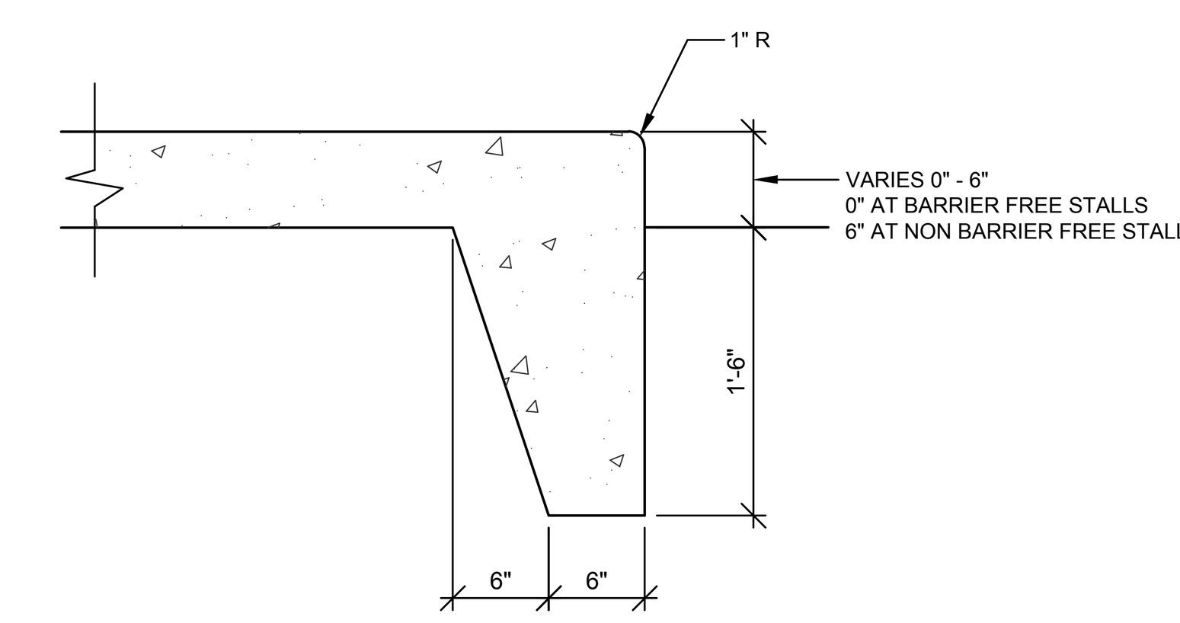


ADA SYMBOL DETAIL
SCALE: NONE

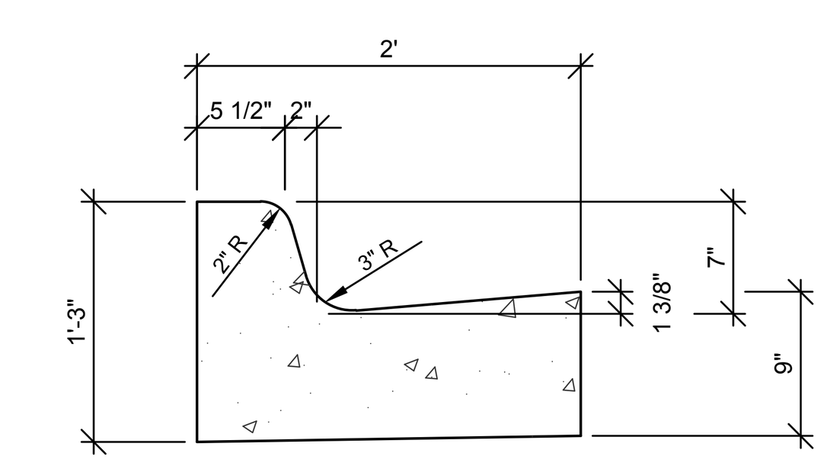


THROUGH LANE ARROW
NOTE: ALL TRAFFIC FLOW ARROWS TO BE PAINTED PER STATE DOT STANDARDS PER DIMENSIONS ABOVE.

DIRECTION PAVEMENT MARKING
SCALE: NONE



CURB & GUTTER - THICKENED SIDEWALK CURB



CURB & GUTTER - DETAIL C4

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REVISIONS

DATE: JULY 2022
SCALE: VARIES

SITE IMPROVEMENT DETAILS

JOB No. 214175
C5.3

EXISTING STRUCTURES

SA02 EXISTING SAN STRUCTURE	RIM 843.35 INV. 833.31 - 8" E INV. 833.32 - 8" W INV. 833.49 - 6" N

EXISTING STRUCTURES

EX04 EXISTING DR STRUCTURE	RIM 843.15 INV. 838.70 - 12" N INV. 839.00 - 12" S
EX05 EXISTING DR STRUCTURE	RIM 843.23 INV. 837.39 - 15" E INV. 837.17 - 15" W INV. 837.91 - 12" N INV. 837.75 - 12" S
EX06 EXISTING DR STRUCTURE	RIM 843.07 INV. 838.24 - 12" S INV. 838.49 - 12" N

STORM STRUCTURES

ST02 DR STRUCTURE, 24 INCH DIA COVER K 0.0 FT SUMP	RIM 848.75 INV. 847.08 - 10" E
ST03 DR STRUCTURE, 60 INCH DIA COVER K 2.0 FT SUMP	RIM 849.48 INV. 846.66 - 10" W INV. 846.66 - 10" E INV. 846.66 - 10" NW
ST04 DR STRUCTURE, 48 INCH DIA COVER K 2.0 FT SUMP	RIM 850.29 INV. 846.29 - 15" NE INV. 846.29 - 10" SE INV. 846.29 - 24" W
ST05 DR STRUCTURE, 24 INCH DIA COVER K 0.0 FT SUMP	RIM 848.38 INV. 844.45 - 12" S
ST06 DR STRUCTURE, 48 INCH DIA COVER K 2.0 FT SUMP	RIM 847.31 INV. 844.10 - 12" N INV. 844.10 - 12" W
ST07 DR STRUCTURE, 48 INCH DIA COVER G 2.0 FT SUMP	RIM 847.00 INV. 843.90 - 12" S
ST08 DR STRUCTURE, 24 INCH DIA COVER K 0.0 FT SUMP	RIM 843.88 INV. 841.83 - 12" E
ST09 DR STRUCTURE, 48 INCH DIA COVER K 2.0 FT SUMP	RIM 845.42 INV. 841.79 - 12" N INV. 841.79 - 12" W INV. 841.79 - 12" S
ST10 DR STRUCTURE, 24 INCH DIA COVER K 0.0 FT SUMP	RIM 842.20 INV. 840.98 - 12" NE
ST11 DR STRUCTURE, 48 INCH DIA COVER K 2.0 FT SUMP	RIM 843.76 INV. 840.75 - 12" N INV. 840.75 - 12" SW INV. 840.75 - 12" E
ST12 DR STRUCTURE, 24 INCH DIA COVER K 0.0 FT SUMP	RIM 846.18 INV. 839.40 - 12" S
ST13 DR STRUCTURE, 48 INCH DIA COVER K 2.0 FT SUMP	RIM 844.35 INV. 839.02 - 12" N INV. 839.02 - 12" W
ST14 DR STRUCTURE, 60 INCH DIA SOLID PER MANUFACTURER 4.5 FT SUMP	RIM 845.21 INV. 838.89 - 12" E INV. 838.89 - 12" W INV. 838.89 - 12" S
ST16 DR STRUCTURE, 24 INCH DIA COVER K 0.0 FT SUMP	RIM 851.60 INV. 847.15 - 10" W

CONC END SECTION, 30 INCH
INV. 845.50

33 FT - STORM SEWER, 30 INCH @ 0.15%

CONC END SECTION, 30 INCH
INV. 845.45

SEWER SERVICE CLEANOUT
RIM 849.32
INV. 839.25 - 6" S
INV. 839.25 - 6" N

CONC END SECTION, 12 INCH
INV. 843.90

1 EA - TEE, 8 INCH X 6 INCH
42 FT - WATER MAIN, DI, 6 INCH, TR DET G
1 EA - FIRE HYDRANT

75 FT - WATER MAIN, DI, 8 INCH, TR DET G

1 EA - 45° BEND, 8 INCH

128 FT - SEWER SERVICE, 6 INCH @ 1.50%

SEWER SERVICE CLEANOUT
RIM 850.91
INV. 841.17 - 6" S

SEE BUILDING PLUMBING PLANS
FOR SEWER SERVICE DEPTHS

37 FT - WATER MAIN, DI, 8 INCH, TR DET G

1 EA - TEE, 8 INCH X 8 INCH
3 EA - GATE VALVE AND BOX, 8 INCH
25 FT - WATER MAIN, DI, 8 INCH, TR DET G
3 FT- WATER MAIN, DI, 6 INCH, TR DET G
1 EA - REDUCER, 8 INC X 6 INCH
1 EA - 22.5° BEND, 6 INCH
1 EA - CONNECT TO EXISTING MAIN, 6 INCH

1 EA - 22.5° BEND, 8 INCH

34 FT - WATER MAIN, DI, 8 INCH, TR DET G

CONC END SECTION, 24 INCH
INV. 846.00

PROPOSED FACILITY

52 FT - SAN. SEWER, 6 INCH @ 1.00%

SEWER SERVICE CLEANOUT
RIM 850.79
INV. 844.39 - 6" SE

PROPOSED OIL AND SAND INTERCEPTOR - SEE C5.1

SEE BUILDING PLUMBING PLANS
FOR SEWER SERVICE DEPTHS

174 FT - STORM SEWER, 24 INCH @ 0.17%

92 FT - WATER MAIN, DI, 8 INCH, TR DET G

1 EA - 22.5° BEND, 8 INCH

32 FT - WATER MAIN, DI, 8 INCH, TR DET G

1 EA - TEE, 8 INCH X 6 INCH
50 FT - WATER MAIN, DI, 6 INCH, TR DET G
1 EA - FIRE HYDRANT

92 FT - STORM SEWER, 15 INCH @ 0.25%

92 FT - SEWER SERVICE, 6 INCH @ 1.50%

SEWER SERVICE CLEANOUT
RIM 847.52
INV. 837.88 - 6" S
INV. 837.88 - 6" N

108 FT - SEWER SERVICE, 6 INCH @ 1.50%

141 FT - STORM SEWER, 12 INCH @ 1.50%

69 FT - STORM SEWER, 12 INCH @ 0.33%

12 FT - STORM SEWER, 12 INCH @ 0.33%

69 FT - STORM SEWER, 12 INCH @ 1.50%

87 FT - STORM SEWER, 12 INCH @ 2.13%

82 FT - SEWER SERVICE,
6 INCH @ 2.54%

107 FT - STORM SEWER, 12 INCH @ 0.33%

58 FT - STORM SEWER, 12 INCH @ 0.33%

125 FT - WATER MAIN, DI, 8 INCH, TR DET G

SEE SHEET C6.2 FOR CONTINUATION
PLAN AND PROFILE

1 EA - TEE, 8 INCH X 8 INCH
3 EA - GATE VALVE AND BOX, 8 INCH
10 FT - WATER MAIN, DI, 8 INCH, TR DET G

258 FT - WATER MAIN, DI, 8 INCH, TR DET G

SEWER SERVICE CLEANOUT
RIM 846.49
INV. 836.25 - 6" S
INV. 836.25 - 6" N

PROPOSED 20' WIDE WIDE WATER MAIN EASEMENT

185 FT - WATER MAIN, DI, 8 INCH, TR DET G

1 EA - 45° BEND, 8 INCH

SEWER SERVICE CLEANOUT
RIM 850.04
INV. 843.80 - 6" SE
INV. 843.80 - 6" NW

73 FT - SAN. SEWER, 6 INCH @ 1.00%

CONNECT TO EXISTING SEWER
SERVICE LATERAL - PLACE CLEANOUT
AT CONNECTION POINT
INV. 843.08 +/-

104 FT - STORM SEWER, 10 INCH @ 0.40%

94 FT - STORM SEWER, 10 INCH @ 0.40%

123 FT - STORM SEWER, 10 INCH @ 0.40%

114 FT - STORM SEWER, 12 INCH @ 0.33%

39 FT - STORM SEWER, 12 INCH @ 0.33%

CAUTION: HAZARDOUS OR
FLAMMABLE MATERIAL

CONNECT TO EXISTING SEWER SERVICE LATERAL - PLACE CLEANOUT AT CONNECTION POINT
INV. 834.18 +/-

1 EA - CONNECT TO EXISTING MAIN, 8 INCH
(TAPPING SADDLE, 8 INCH X 8 INCH)
1 EA - GATE VALVE AND BOX, 8 INCH

PROVIDE 18" MIN. VERTICAL SEPARATION
(TYP. ALL SEWER CROSSINGS)

SAWCUT AND REMOVE PAVEMENT TO ACCOMPLISH WATER MAIN CONNECTION -
TRAFFIC CONTROL TO BE COORDINATED WITH THE CITY OF KALAMAZOO. PATCH
ASPHALT TO MATCH EXISTING CROSS SECTION - ASSUME 6" HMA OVER 8" 21AA
AGGREGATE BASE

SEE SHEET C6.3 AND C6.4 FOR
CONTINUATION AND SERVICE/EMERGENCY
VEHICLE ACCESS DRIVE PLAN AND PROFILE

CAUTION: HAZARDOUS OR
FLAMMABLE MATERIAL

BUS DROP-OFF

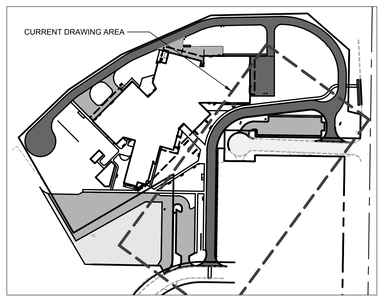
VANRICK DRIVE

EASY STREET

66' R.O.W.

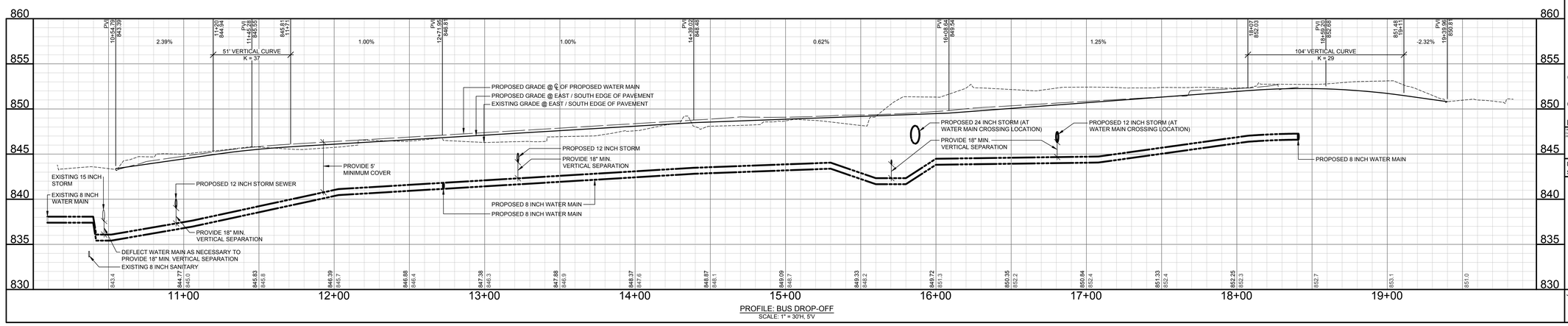
60' R.O.W.

0 30 45 60
1 inch = 30 ft.



AREA KEY MAP
SCALE: 1" = 200'

PLAN: BUS DROP-OFF
SCALE: 1" = 30'H



PROFILE: BUS DROP-OFF
SCALE: 1" = 30'H, 5'V

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630.527.2320

PROJECT NAME:

KALAMAZOO RESA CTE Career & Technical Education

CAREER & TECHNICAL EDUCATION CENTER
VANRICK DRIVE
KALAMAZOO, MI 49001

KALAMAZOO RESA
INSPIRING EDUCATIONAL EXCELLENCE

KALAMAZOO RESA
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PORTAGE, MI 49002

02	8/10/2022	PDS
	ISSUED FOR SITE PLAN REVIEW	
01	8/1/2022	PDS
	ISSUED FOR BIDDING	

REVISIONS

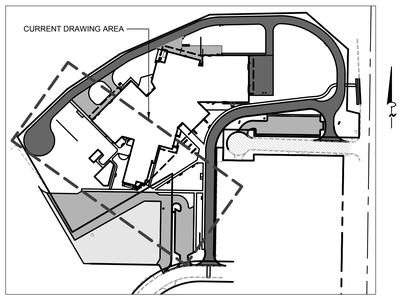
DATE: JULY 2022
SCALE: 1" = 30'H, 5'V

PLAN AND PROFILE:
BUS DROP-OFF
STA. 10+00 TO STA. 20+00

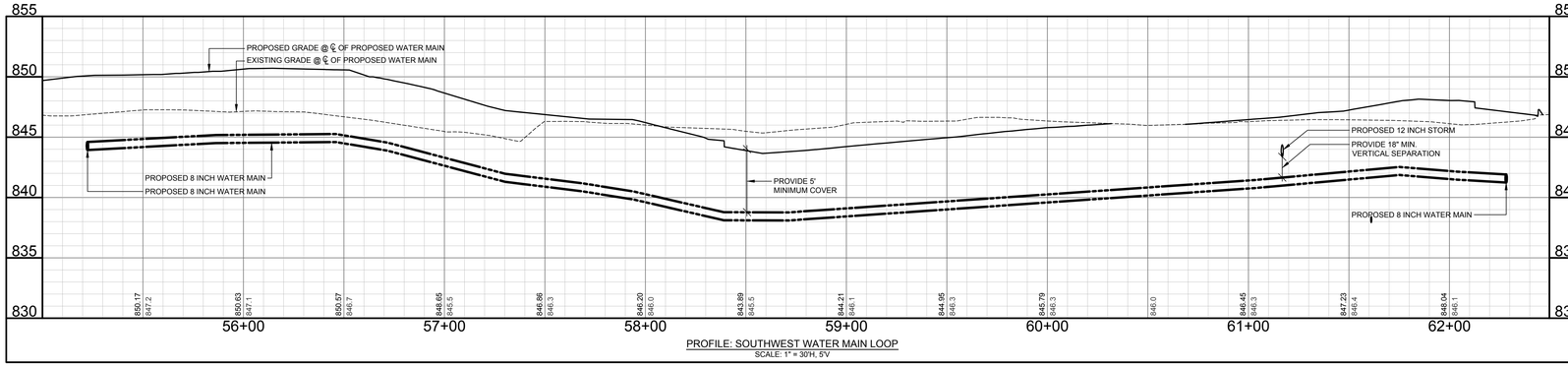
JOB No. 214175

C6.1

PLAN: SOUTHWEST WATER MAIN LOOP
SCALE: 1" = 30'H



AREA KEY MAP
SCALE: 1" = 200'



PROFILE: SOUTHWEST WATER MAIN LOOP
SCALE: 1" = 30'H, 5'V

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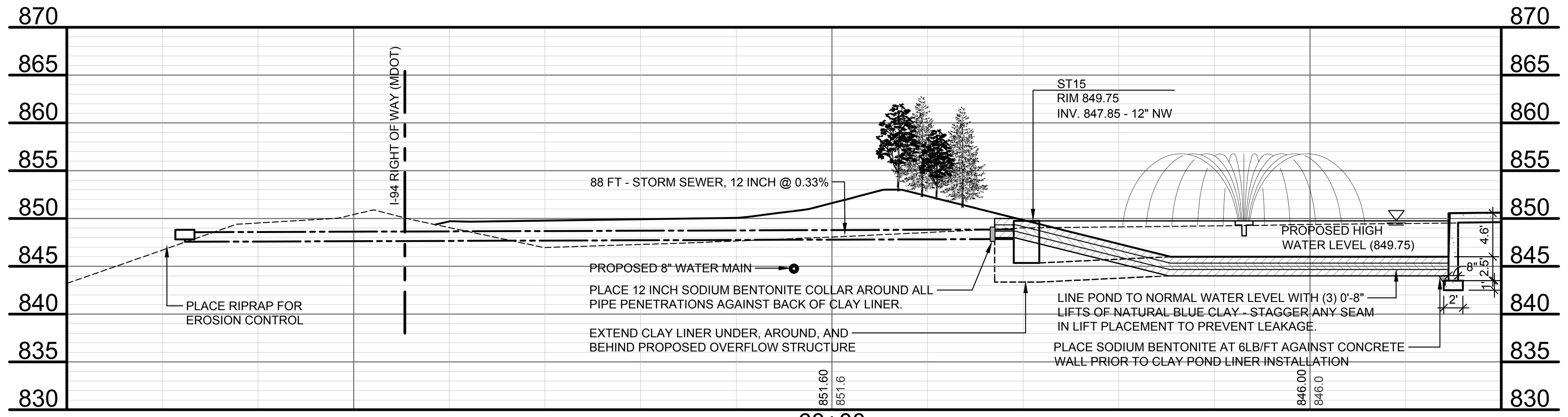
REVISIONS

DATE: JULY 2022
SCALE: 1" = 30'H, 5'V

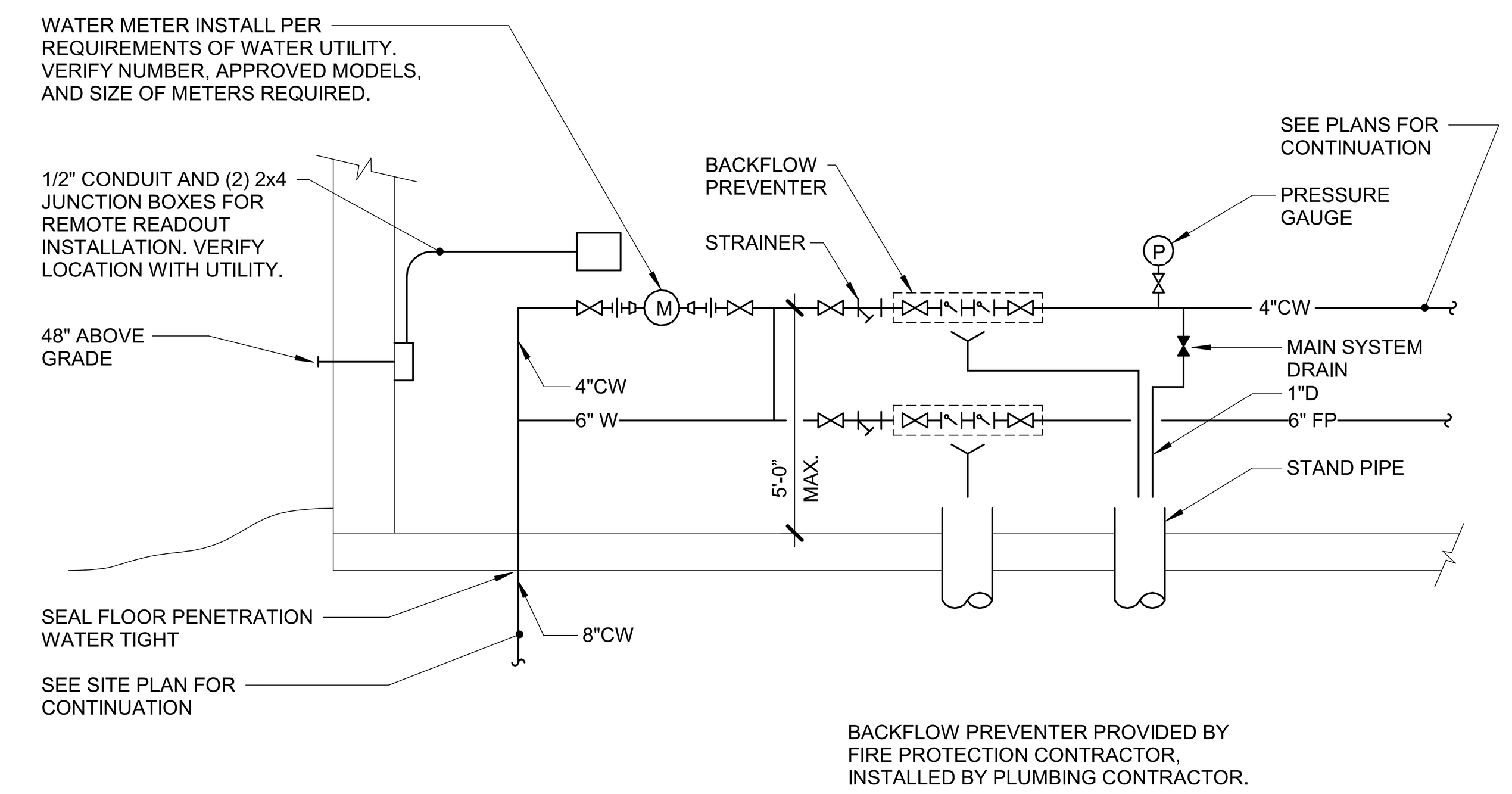
PLAN AND PROFILE: SOUTHWEST WATER MAIN LOOP
STA. 55+00 TO STA. 62+50

JOB No. 214175

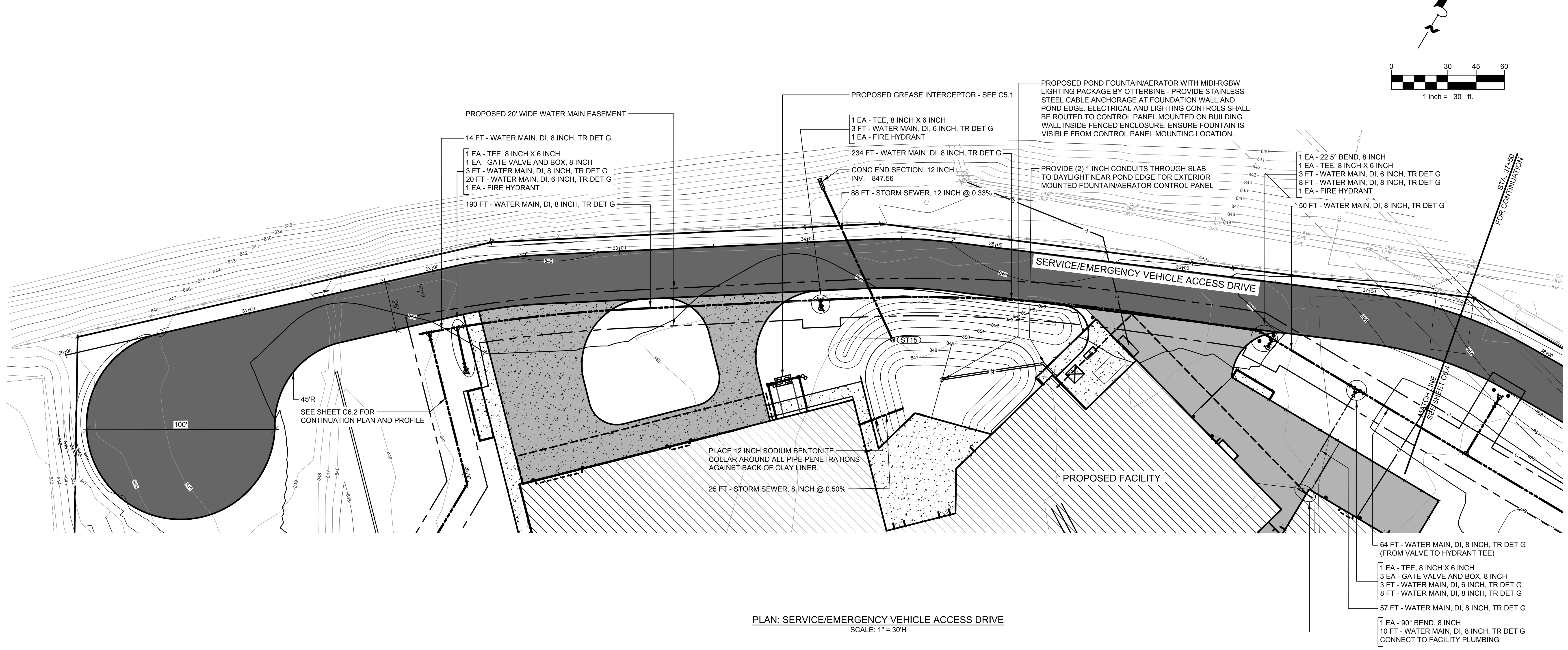
C6.2



PROFILE: NORTH POND
SCALE: 1" = 10'

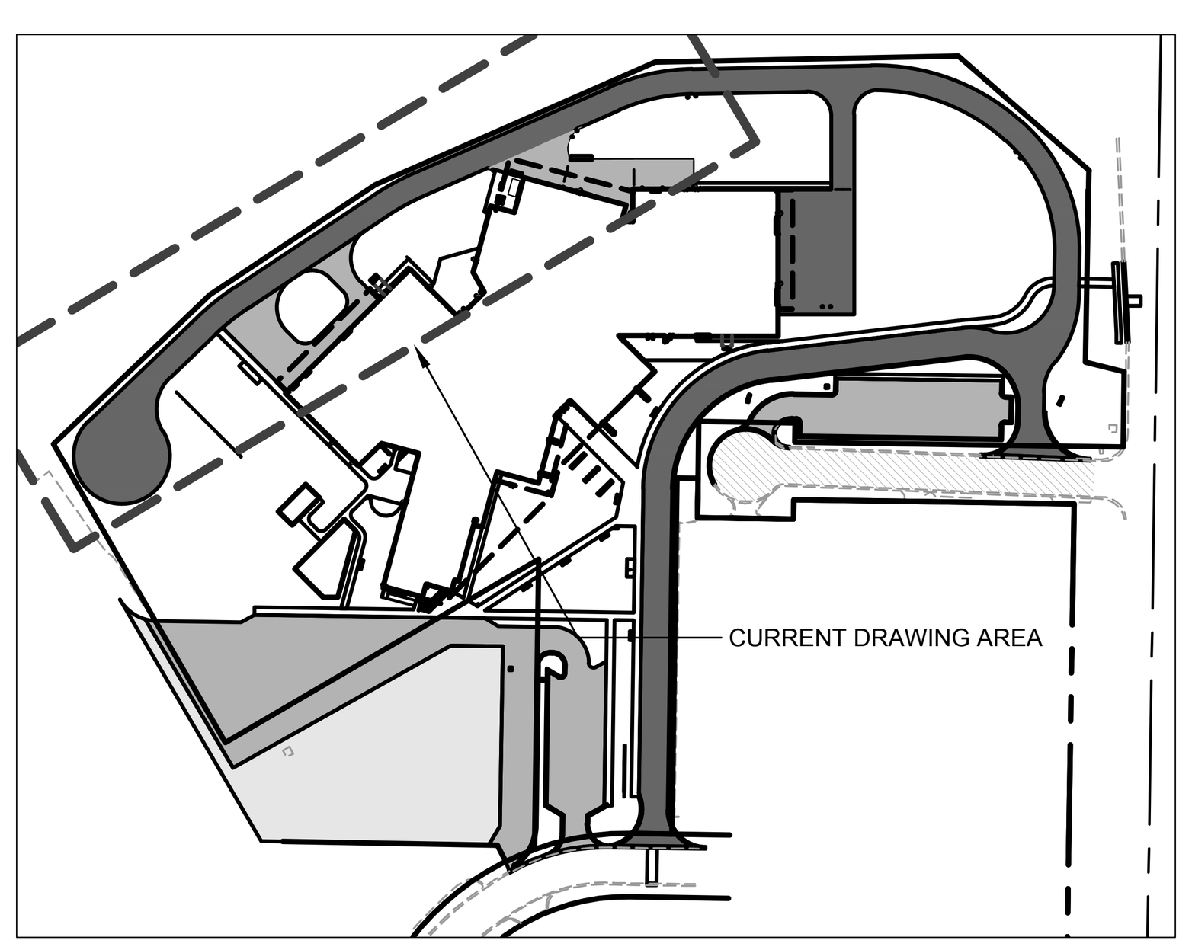


1 DOMESTIC WATER ENTRANCE
NO SCALE

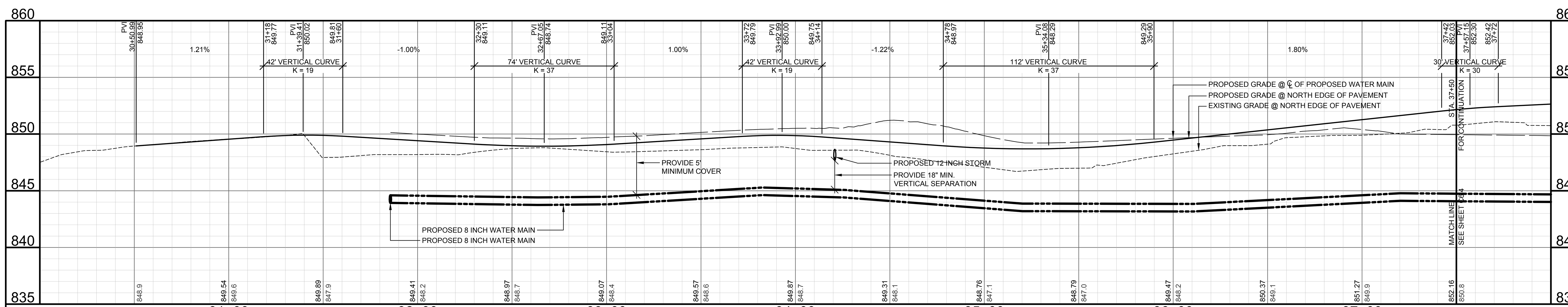


PLAN: SERVICE/EMERGENCY VEHICLE ACCESS DRIVE
SCALE: 1" = 30'H

STORM STRUCTURES	
ST15	
DR STRUCTURE, 24 INCH DIA	RIM 849.75
COVER G	INV. 847.85 - 12" NW
2.0 FT SUMP	



AREA KEY MAP
SCALE: 1" = 200'



PROFILE: SERVICE/EMERGENCY VEHICLE ACCESS DRIVE
SCALE: 1" = 30'H, 5'V

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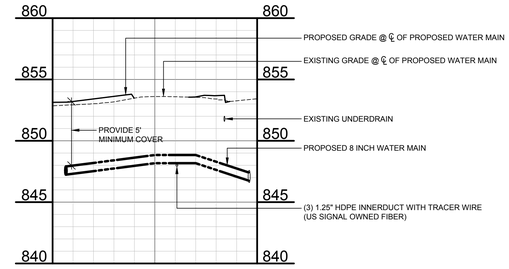
SCALE: 1" = 30' H, 5' V

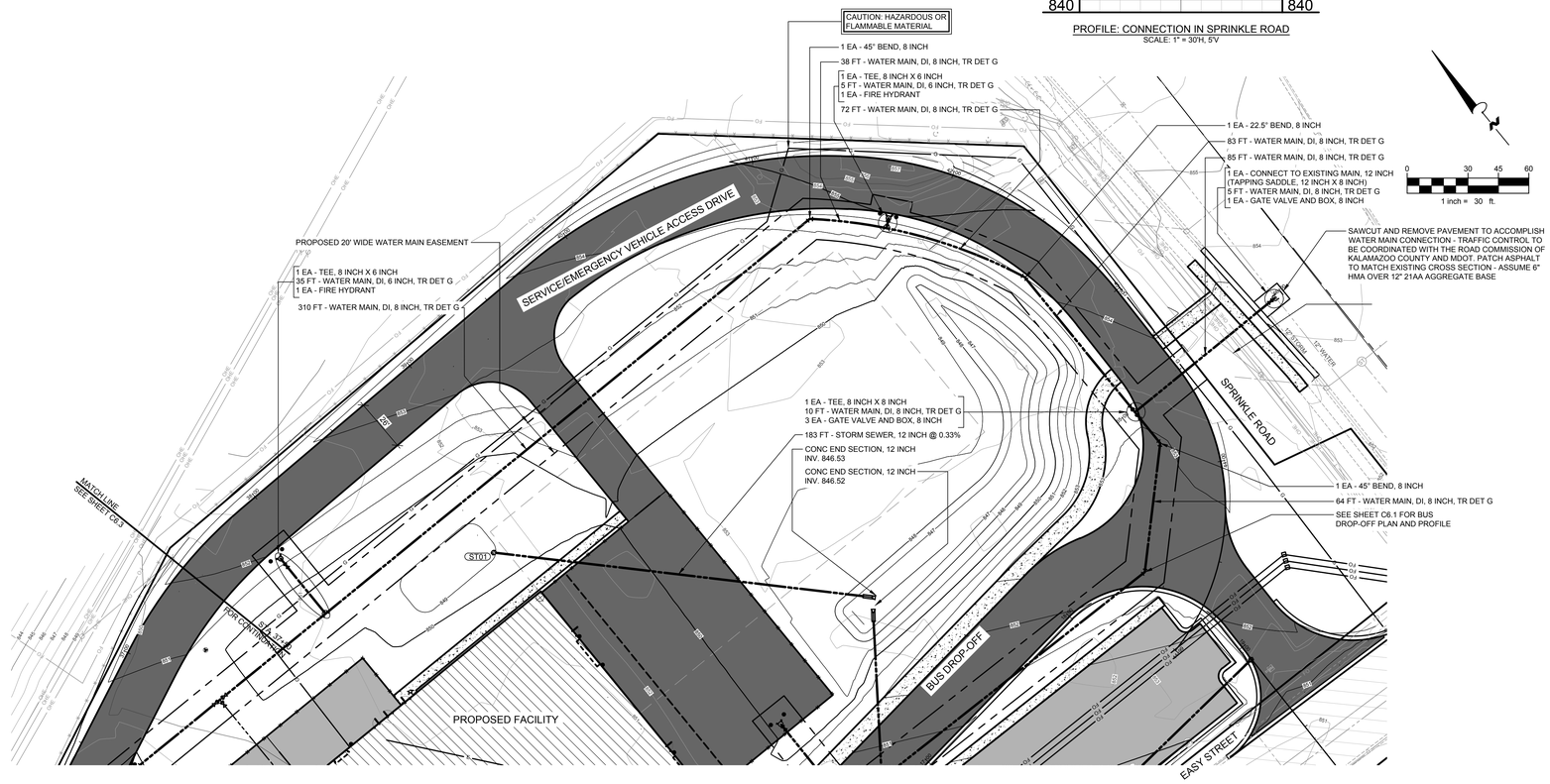
PLAN AND PROFILE: EMERGENCY VEHICLE ACCESS DRIVE
STA. 30+00 TO STA. 37+50

JOB No. 214175

C6.3



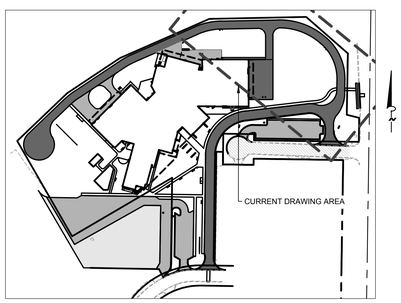
PROFILE: CONNECTION IN SPRINKLE ROAD
SCALE: 1" = 30'H, 5'V



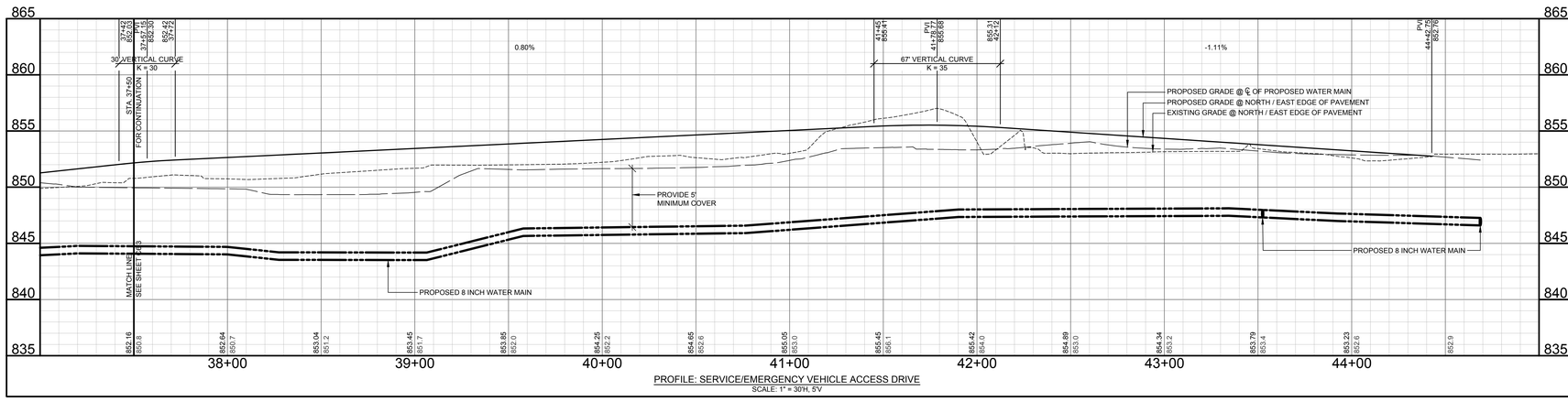
PLAN: SERVICE/EMERGENCY VEHICLE ACCESS DRIVE
SCALE: 1" = 30'H

STORM STRUCTURES

ST01
DR STRUCTURE, 24 INCH DIA — RIM 849.00
COVER G — INV. 847.14 - 12" SE
2.0 FT SUMP



AREA KEY MAP
SCALE: 1" = 200'



PROFILE: SERVICE/EMERGENCY VEHICLE ACCESS DRIVE
SCALE: 1" = 30'H, 5'V

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PROJECT NAME:

KALAMAZOO RESA CTE Career & Technical Education

CAREER & TECHNICAL EDUCATION CENTER
VANRICK DRIVE
KALAMAZOO, MI 49001

KALAMAZOO RESA
INSPIRING EDUCATIONAL EXCELLENCE

KALAMAZOO RESA
1819 EAST MILHAM ROAD
PORTAGE, MI 49002

02	8/10/2022	PDS
	ISSUED FOR SITE PLAN REVIEW	
01	8/1/2022	PDS
	ISSUED FOR BIDDING	

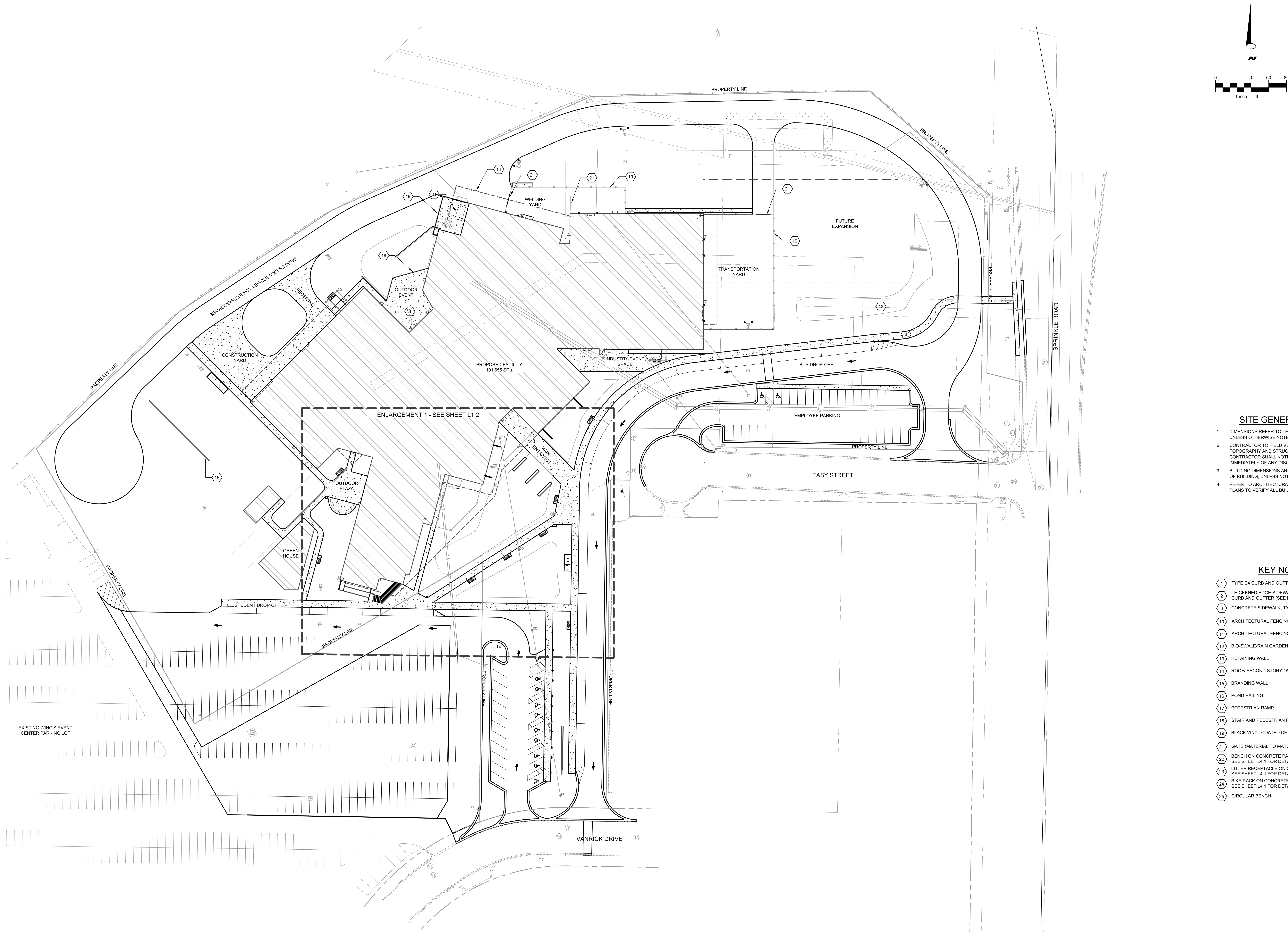
REVISIONS

DATE: JULY 2022
SCALE: 1" = 30'H, 5'V

PLAN AND PROFILE: SERVICE/EMERGENCY VEHICLE ACCESS DRIVE
STA. 37+50 TO STA. 45+00

JOB No. 214175

C6.4



SITE GENERAL NOTES

1. DIMENSIONS REFER TO THE EDGE OF PAVEMENT UNLESS OTHERWISE NOTED
2. CONTRACTOR TO FIELD VERIFY ALL EXISTING TOPOGRAPHY AND STRUCTURES ON SITE. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY OF ANY DISCREPANCIES.
3. BUILDING DIMENSIONS ARE TO THE OUTSIDE FACE OF BUILDING, UNLESS NOTED OTHERWISE.
4. REFER TO ARCHITECTURAL AND STRUCTURAL PLANS TO VERIFY ALL BUILDING DIMENSIONS.

KEY NOTES

- 1 TYPE C4 CURB AND GUTTER (SEE DETAILS)
- 2 THICKENED EDGE SIDEWALK INTEGRAL CURB AND GUTTER (SEE DETAILS)
- 3 CONCRETE SIDEWALK, TYP.
- 10 ARCHITECTURAL FENCING, 9 FT
- 11 ARCHITECTURAL FENCING, 12 FT
- 12 BIO-SWALE/RAIN GARDEN
- 13 RETAINING WALL
- 14 ROOF/ SECOND STORY OVERHANG
- 15 BRANDING WALL
- 16 POND RAILING
- 17 PEDESTRIAN RAMP
- 18 STAIR AND PEDESTRIAN RAMP
- 19 BLACK VINYL COATED CHAIN LINK FENCE, 8 FT
- 21 GATE (MATERIAL TO MATCH FENCE)
- 22 BENCH ON CONCRETE PAD - SEE SHEET L4.1 FOR DETAIL
- 23 LITTER RECEPTACLE ON CONCRETE PAD - SEE SHEET L4.1 FOR DETAIL
- 24 BIKE RACK ON CONCRETE PAD - SEE SHEET L4.1 FOR DETAIL
- 25 CIRCULAR BENCH

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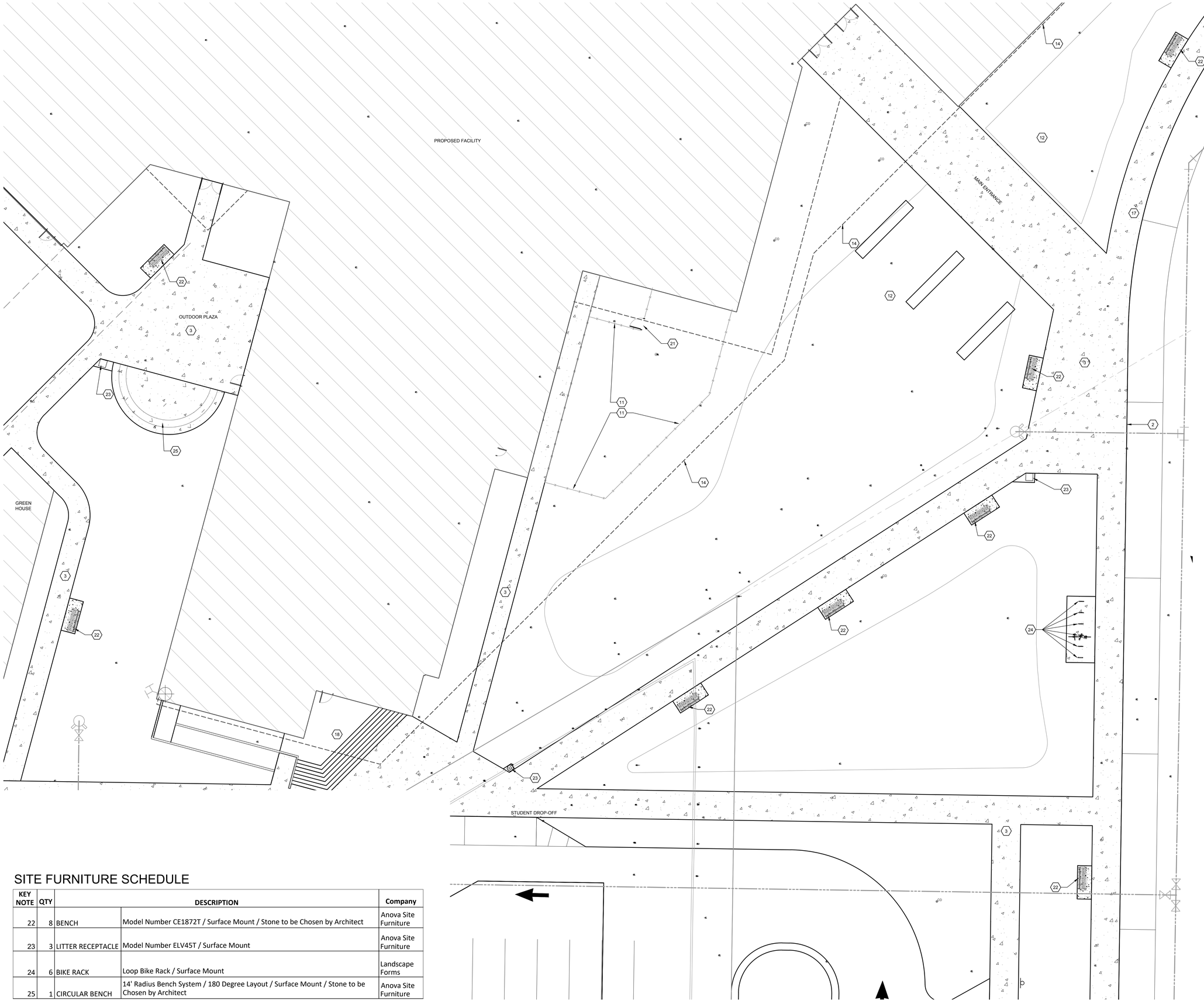
DATE: MARCH 2022
SCALE: 1" = 40'

SITE LAYOUT PLAN OVERALL

JOB No. 214175

L1.1



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22. BENCH ON CONCRETE PAD - SEE SHEET L4.1 FOR DETAIL
23. LITTER RECEPTACLE ON CONCRETE PAD - SEE SHEET L4.1 FOR DETAIL
24. BIKE RACK ON CONCRETE PAD - SEE SHEET L4.1 FOR DETAIL
25. CIRCULAR BENCH

SITE FURNITURE SCHEDULE

KEY NOTE	QTY	DESCRIPTION		Company
22	8	BENCH	Model Number CE1872T / Surface Mount / Stone to be Chosen by Architect	Anova Site Furniture
23	3	LITTER RECEPTACLE	Model Number ELV45T / Surface Mount	Anova Site Furniture
24	6	BIKE RACK	Loop Bike Rack / Surface Mount	Landscape Forms
25	1	CIRCULAR BENCH	14' Radius Bench System / 180 Degree Layout / Surface Mount / Stone to be Chosen by Architect	Anova Site Furniture

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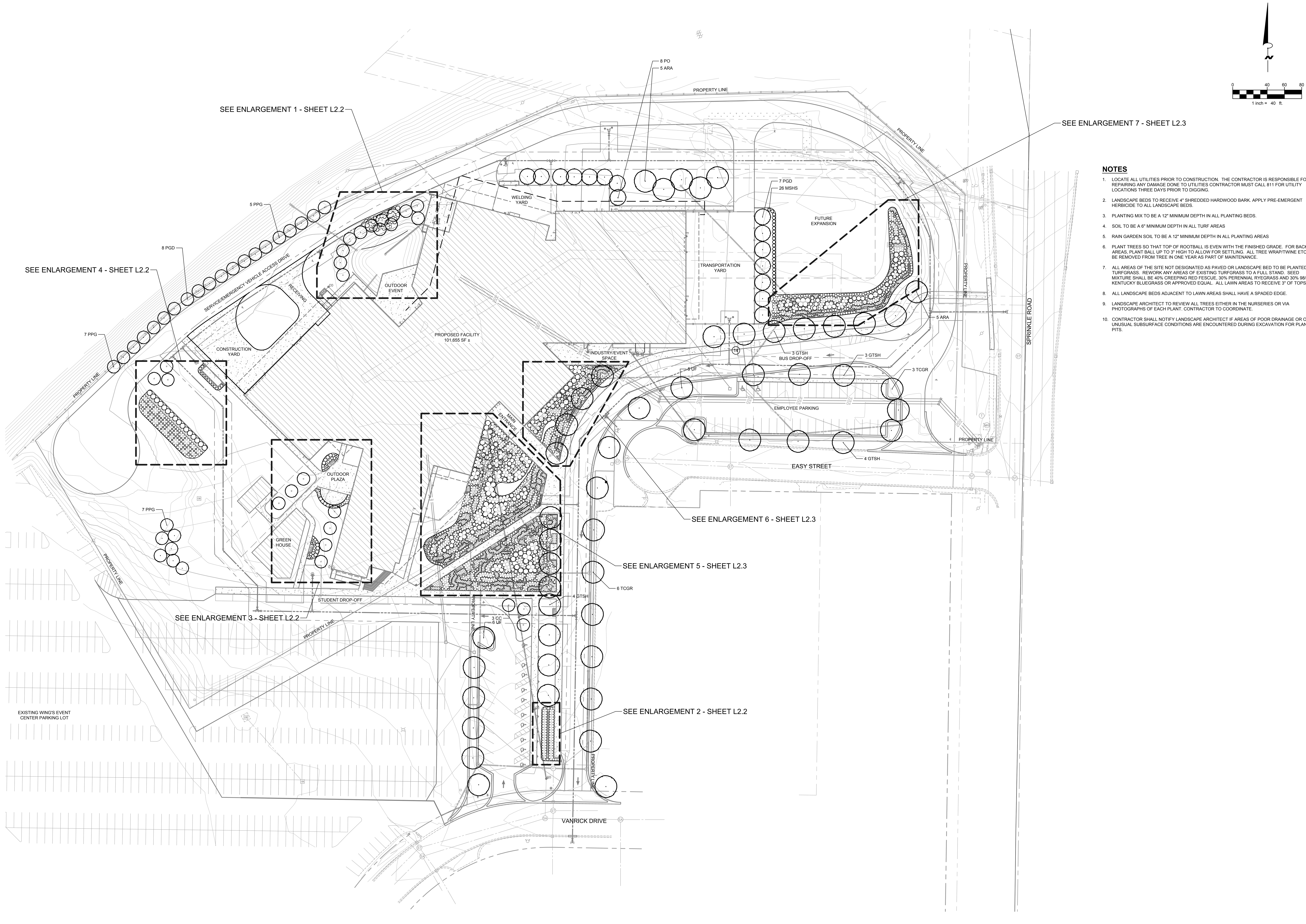
SITE LAYOUT PLAN
NORTH PLAZA ENLARGEMENT

JOB No. 214175

L1.2



NOTES

1. LOCATE ALL UTILITIES PRIOR TO CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR REPAIRING ANY DAMAGE DONE TO UTILITIES CONTRACTOR MUST CALL 811 FOR UTILITY LOCATIONS THREE DAYS PRIOR TO DIGGING.
2. LANDSCAPE BEDS TO RECEIVE 4" SHREDDED HARDWOOD BARK. APPLY PRE-EMERGENT HERBICIDE TO ALL LANDSCAPE BEDS.
3. PLANTING MIX TO BE A 12" MINIMUM DEPTH IN ALL PLANTING BEDS.
4. SOIL TO BE A 6" MINIMUM DEPTH IN ALL TURF AREAS
5. RAIN GARDEN SOIL TO BE A 12" MINIMUM DEPTH IN ALL PLANTING AREAS
6. PLANT TREES SO THAT TOP OF ROOTBALL IS EVEN WITH THE FINISHED GRADE. FOR BACKFILL AREAS, PLANT BALL UP TO 3" HIGH TO ALLOW FOR SETTLING. ALL TREE WRAP/TWINE ETC TO BE REMOVED FROM TREE IN ONE YEAR AS PART OF MAINTENANCE.
7. ALL AREAS OF THE SITE NOT DESIGNATED AS PAVED OR LANDSCAPE BED TO BE PLANTED IN TURFGRASS. REWORK ANY AREAS OF EXISTING TURFGRASS TO A FULL STAND. SEED MIXTURE SHALL BE 40% CREEPING RED FESCUE, 30% PERENNIAL RYEGRASS AND 30% 98/85 KENTUCKY BLUEGRASS OR APPROVED EQUAL. ALL LAWN AREAS TO RECEIVE 3" OF TOPSOIL.
8. ALL LANDSCAPE BEDS ADJACENT TO LAWN AREAS SHALL HAVE A SPADED EDGE.
9. LANDSCAPE ARCHITECT TO REVIEW ALL TREES EITHER IN THE NURSERIES OR VIA PHOTOGRAPHS OF EACH PLANT. CONTRACTOR TO COORDINATE.
10. CONTRACTOR SHALL NOTIFY LANDSCAPE ARCHITECT IF AREAS OF POOR DRAINAGE OR OTHER UNUSUAL SUBSURFACE CONDITIONS ARE ENCOUNTERED DURING EXCAVATION FOR PLANTING PITS.

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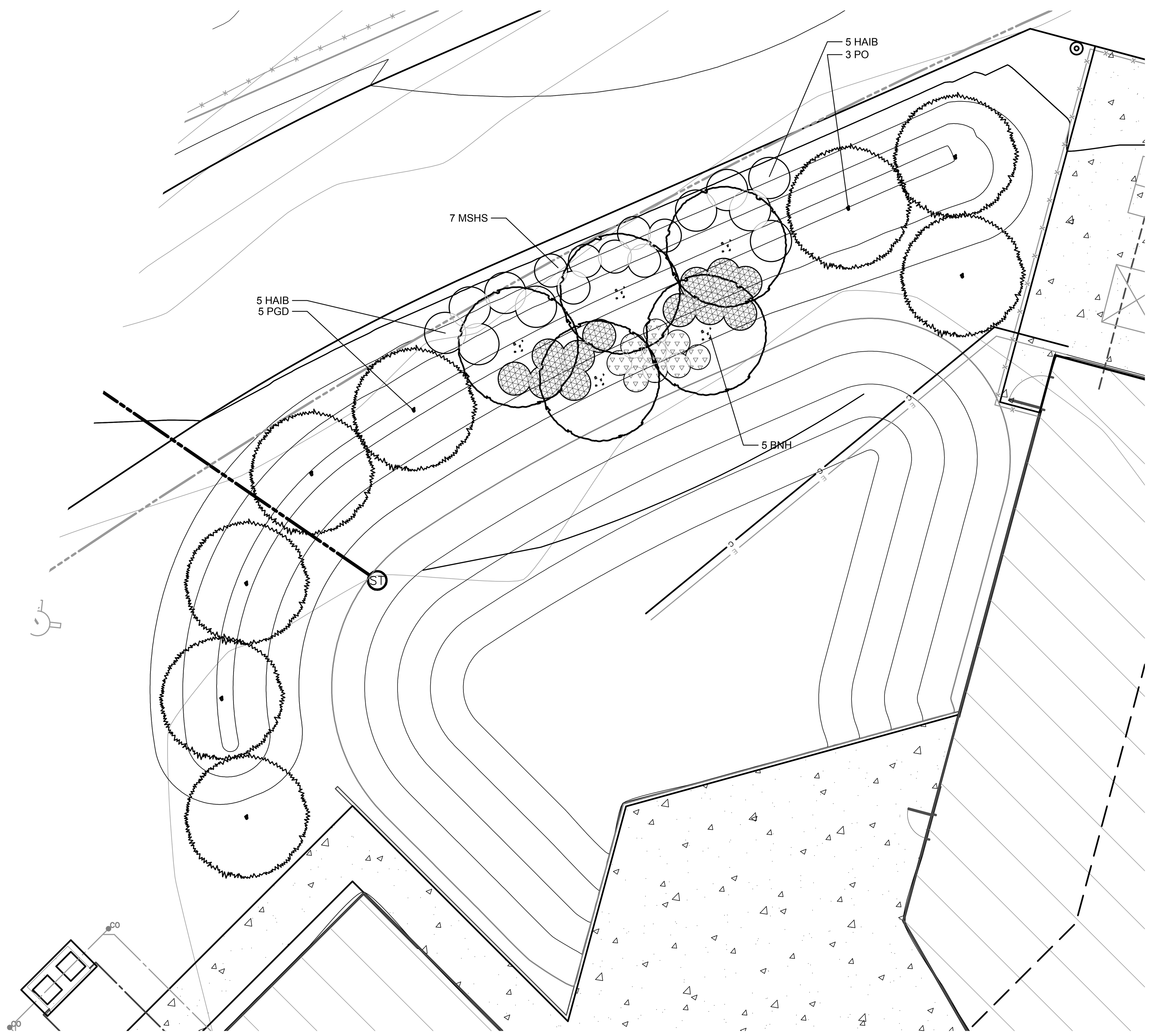
DATE: JULY 2022
SCALE: 1" = 40'

SITE LANDSCAPE PLAN OVERALL

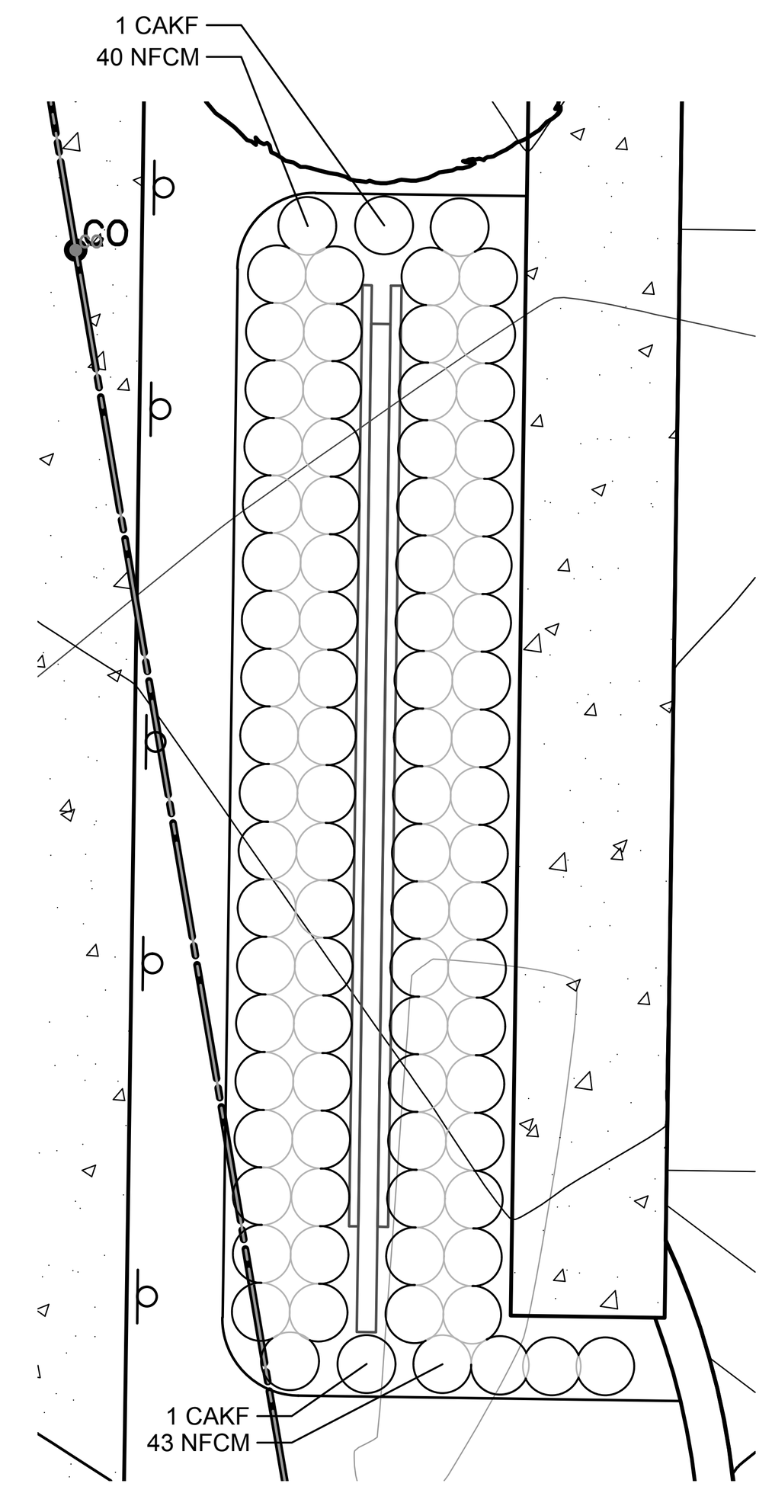
JOB No. 214175

L2.1



ENLARGEMENT 1

1" = 10'-0"

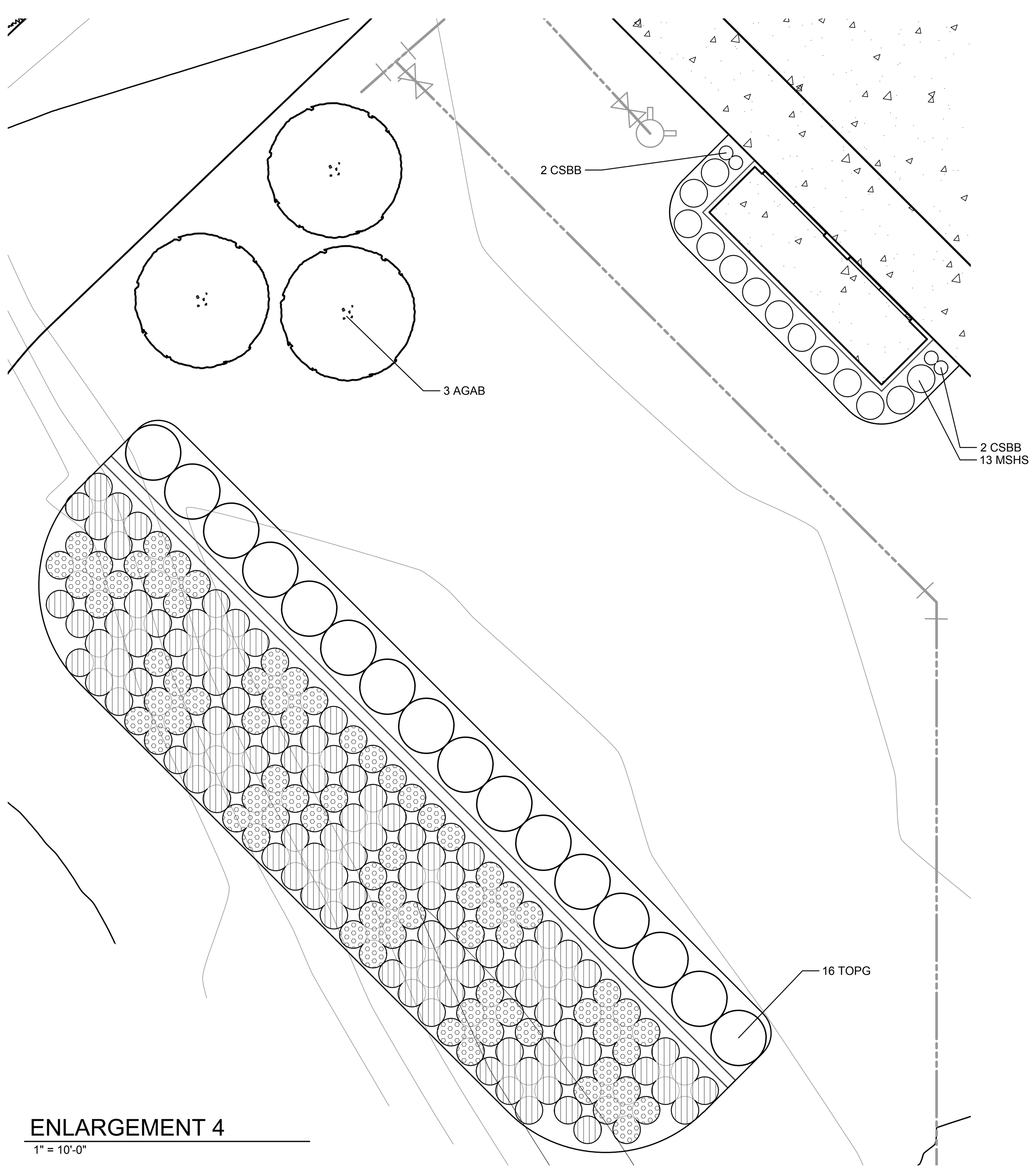


ENLARGEMENT 2

1" = 10'-0"

ENLARGEMENT 3

1" = 10'-0"



ENLARGEMENT 4

1" = 10'-0"

LEGEND

- EVERGREEN TREE
- ORNAMENTAL TREE
- SHRUBS & PERENNIALS
- HHSE - SEE PLANT LIST FOR QUANTITY
- NFWL - SEE PLANT LIST FOR QUANTITY
- AKLB - SEE PLANT LIST FOR QUANTITY
- RFG - SEE PLANT LIST FOR QUANTITY
- MSHS - SEE PLANT LIST FOR QUANTITY
- BGBA - SEE PLANT LIST FOR QUANTITY
- HSS - SEE PLANT LIST FOR QUANTITY

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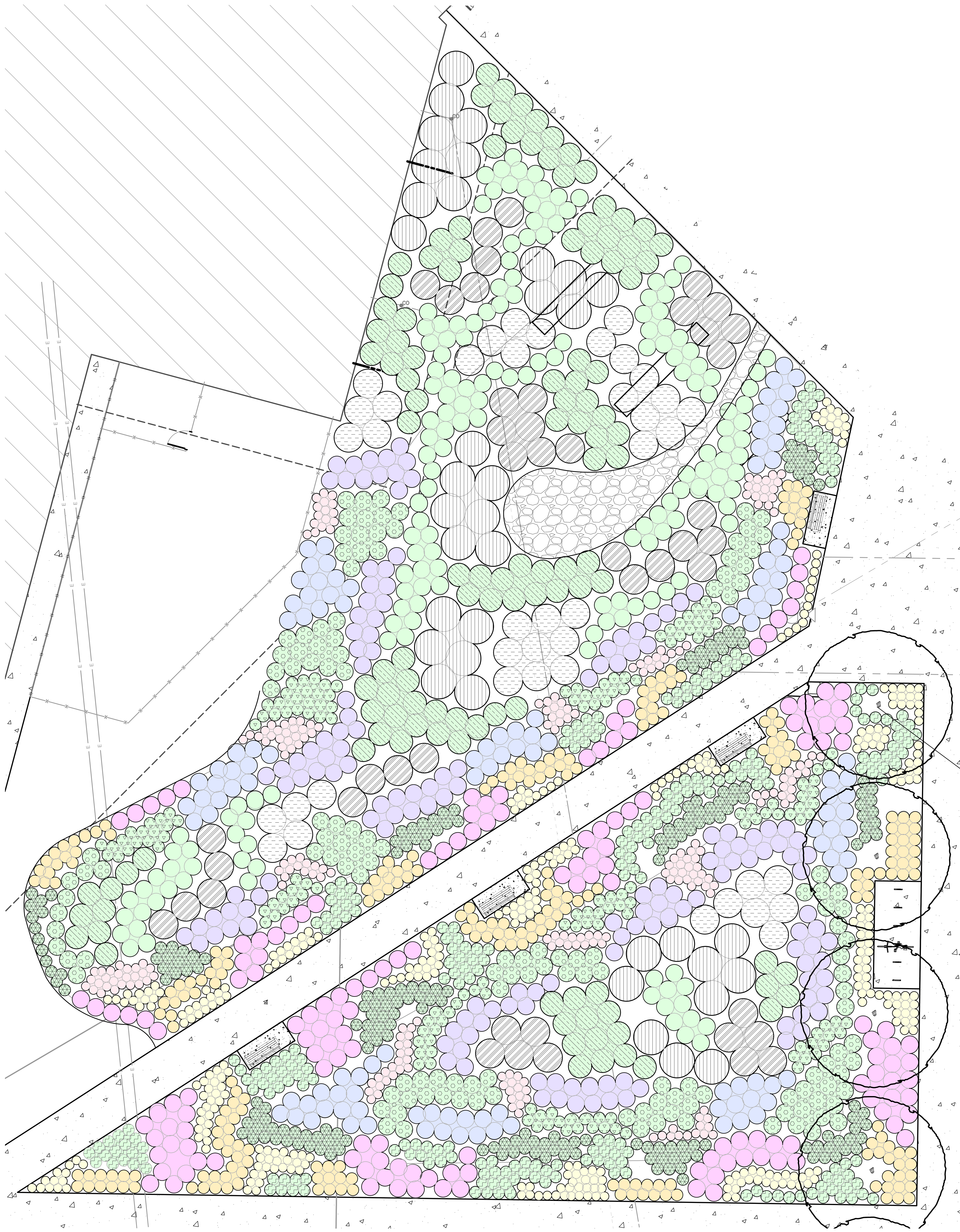
DATE: JULY 2022
SCALE: 1" = 20'

SITE LANDSCAPE PLAN
ENLARGEMENTS
1, 2, 3 & 4

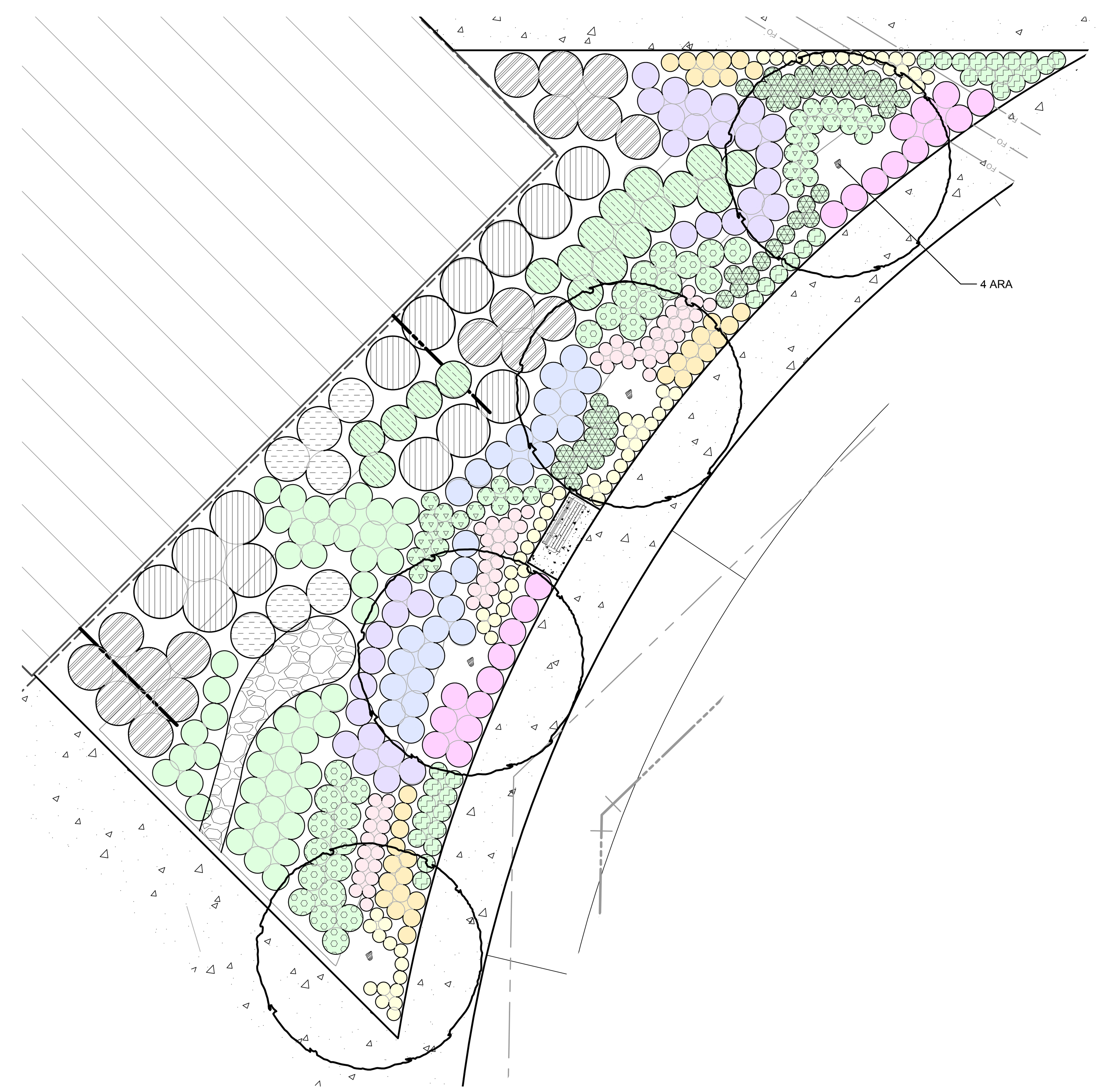
JOB No. 214175

L2.2



ENLARGEMENT 5

1" = 10'-0"



ENLARGEMENT 6

1" = 10'-0"

ENLARGEMENT 7

1" = 10'-0"

LEGEND

- SHADE TREE
- SHRUBS & PERENNIALS
- CSA - SEE PLANT LIST FOR QUANTITY
- CAB - SEE PLANT LIST FOR QUANTITY
- VC - SEE PLANT LIST FOR QUANTITY
- CAKF - SEE PLANT LIST FOR QUANTITY
- BGBA - SEE PLANT LIST FOR QUANTITY
- MSHS - SEE PLANT LIST FOR QUANTITY
- PSR - SEE PLANT LIST FOR QUANTITY
- HSS - SEE PLANT LIST FOR QUANTITY
- CB - SEE PLANT LIST FOR QUANTITY
- ANPC - SEE PLANT LIST FOR QUANTITY
- RFG - SEE PLANT LIST FOR QUANTITY
- EPM - SEE PLANT LIST FOR QUANTITY
- BBS - SEE PLANT LIST FOR QUANTITY
- AT - SEE PLANT LIST FOR QUANTITY
- PAT - SEE PLANT LIST FOR QUANTITY

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DATE: JULY 2022
SCALE: 1" = 20'

SITE LANDSCAPE PLAN ENLARGEMENTS 5, 6 & 7

JOB No. 214175

L2.3

PLANT LIST

NOTE: QUANTITIES ON THE PLANT LIST ARE PROVIDED FOR INFORMATION ONLY. PLANT QUANTITIES UNDER THE CONTRACT ARE INDICATED ON THE PLANS. IN THE EVENT OF ANY DISCREPANCIES, THE CONTRACT SHALL BE BASED ON THE QUANTITIES SHOWN ON THE PLANS.

CODE	BOTANICAL NAME	COMMON NAME	QTY	CAL	HT	ROO	REMARKS
SHADE TREES							
ARA	ACER RUBRUM 'ARMSTRONG'	ARMSTRONG RED MAPLE	18	4"		B&B	SINGLE STRAIGHT T
GBAG	GINKGO BILOBA 'AUTUMN GOLD'	AUTUMN GOLD GINGKO	0	4"		B&B	SINGLE STRAIGHT T
GTSH	GLEDITSIA TRIACANTHOS VAR. INERMIS 'SHADEMASTER'	SHADEMASTER HONEYLOCUST	14	4"		B&B	SINGLE STRAIGHT T
TCGR	TILIA CORDATA 'GREENSPIRE'	GREENSPIRE LITTLELEAF LINDEN	9	4"		B&B	SINGLE STRAIGHT T
UF	ULMUS X 'FRONTIER'	FRONTIER ELM	11	4"		B&B	SINGLE STRAIGHT T
EVERGREEN TREES							
PA	PICEA ABIES	NORWAY SPRUCE	0		8'	B&B	SINGLE STRAIGHT T
PGD	PICEA GLAUCA 'DENSATA'	BLACK HILLS SPRUCE	20		8'	B&B	SINGLE STRAIGHT T
PO	PICEA OMORIKA	SERBIAN SPRUCE	11		8'	B&B	SINGLE STRAIGHT T
PPG	PICEA PUNGENS 'GLAUCA'	COLORADO BLUE SPRUCE	19		8'	B&B	SINGLE STRAIGHT T
ORNAMENTAL TREES							
AGAB	AMELANCHIER X GRANDIFLORA 'AUTUMN BRILLIANCE'	AUTUMN BRILLIANCE APPLE SERVICEBERRY	7		8'	B&B	MULTI-STEM, 4-5 STE
BNH	BETULA NIGRA 'HERITAGE'	HERITAGE RIVER BIRCH	5		8'	B&B	MULTI-STEM, 4-5 STE
CC	CERCIS CANADENSIS	EASTERN REDBUD	3		8'	B&B	MULTI-STEM, 4-5 STE
MLM	MAGNOLIA X LOEBNERI "MERRILL"	MERRILL MAGNOLIA	3		8'	B&B	MULTI-STEM, 4-5 STE
SHRUBS							
AG	ABELIA X GRANDIFLORA	GLOSSY ABELIA	0			#3	5'-0" ON CENTER
CAB	CORNUS ALBA 'BAILHALO'	IVORY HALO DOGWOOD	62			#5	6'-0" ON CENTER
CSA	CORNUS SERICEA 'ALLEMANS'	ALLEMAN'S RED TWIG DOGWOOD	71			#5	5'-0" ON CENTER
HPL	HYDRANGEA PANICULATA 'LIMELIGHT'	LIMELIGHT HYDRANGEA	0			#3	8'-0" ON CENTER
HAIB	HYDRANGEA ARBORESCENS 'INCREDIBALL BLUSH'	INCREDIBALL BLUSH SMOOTH HYDRANGEA	10			#3	5'-0" ON CENTER
TOPG	THUJA OCCIDENTALIS 'POLAR GOLD'	POLAR GOLD ARBORVITAE	16			#3	6'-0" ON CENTER
VC	VIBURNUM CARLESII 'SPICE BABY'	SPICE BABY KOREANSPICE VIBURNUM	65			#5	5'-0" ON CENTER
GRASSES							
BGBA	BOUTELOUA GRACILIS 'BLONDE AMBITION'	BLONDE AMBITION BLUE GRAMA GRASS	255			#1	3'-0" ON CENTER
CAKF	CALAMAGROSTIS ACUTIFLORA 'KARL FOERSTER'	KARL FOERSTER FEATHER REED GRASS	301			#3	3'-0" ON CENTER
CB	CAREX BEBBII	BEBB'S OVAL SEDGE	206			#1	2'-0" ON CENTER
CSBB	CAREX SIDEROSTICHA 'BANANA BOAT'	BANANA BOAT SEDGE	4			#1	1'-6" ON CENTER
HSS	HELICTOTRICHON SEMPERVIRENS 'SAPPHIRE'	SAPPHIRE BLUE OAT GRASS	393			#1	2'-0" ON CENTER
MSHS	MISCANTHUS SINENSIS 'HURON SUNRISE'	HURON SUNRISE MISCANTHUS	235			#1	4'-0" ON CENTER
MSML	MISCANTHUS SINENSIS 'MORNING LIGHT'	MORNING LIGHT MISCANTHUS	0			#1	3'-6" ON CENTER
PSR	PENNISETUM SETACEUM 'RUBRUM'	GRACEFUL GRASSES PURPLE FOUNTAIN GRASS	253			#1	2'-0" ON CENTER
PERENNIALS							
AT	ASCLEPIAS TUBEROSA	BUTTERFLY MILKWEED	338			#1	2'-0" ON CENTER
ANPC	ASTER NOVAE-ANGLIAE 'PINK CRUSH'	PINK CRUSH NEW ENGLAND ASTER	213			#1	3'-0" ON CENTER
AKLB	ASTER HYBRID 'KICKIN LILAC BLUE'	KICKIN LILAC BLUE ASTER	96			#1	3'-0" ON CENTER
AG	ATHYRIUM HYBRID 'GHOST'	GHOST FERN	0			#1	2'-0" ON CENTER
BBS	BAPTISIA HYBRID 'BLUEBERRY SUNDAE'	DECADENCE 'BLUEBERRY SUNDAE' FALSE INDIGO	193			#1	3'-0" ON CENTER
EPM	ECHINACEA PURPUREA 'MAGNUS'	MAGNUS PURPLE CONEFLOWER	386			#1	1'-6" ON CENTER
EY	ERYNGIUM YUCCIFOLIUM	RATTLESNAKE MASTER	0			#1	3'-0" ON CENTER
HHSE	HOSTA 'HOPE SPRINGS ETERNAL'	SHADOWLAND 'HOPE SPRINGS ETERNAL' HOSTA	12			#1	4'-0" ON CENTER
MSTR	MATTEUCCIA STRUTHIOPTERIS	EUROPEAN OSTRICH FERN	0			#1	4'-0" ON CENTER
NFCM	NEPETA FAASSENII 'CAT'S MEOW'	CAT'S MEOW CATMINT	83			#1	3'-0" ON CENTER
NFWL	NEPETA X FAASSENII 'WALKER'S LOW'	WALKER'S LOW CATMINT	9			#1	3'-0" ON CENTER
OC	OSMUNDA CINNAMOMEA	CINNAMON FERN	0			#1	3'-0" ON CENTER
PAT	PEROVSKIA ATRIPLICIFOLIA	RUSSIAN SAGE	232			#1	3'-0" ON CENTER
RFG	RUDBECKIA FULGIDA 'GOLDSTURM'	BLACK EYED SUSAN	579			#1	1'-6" ON CENTER

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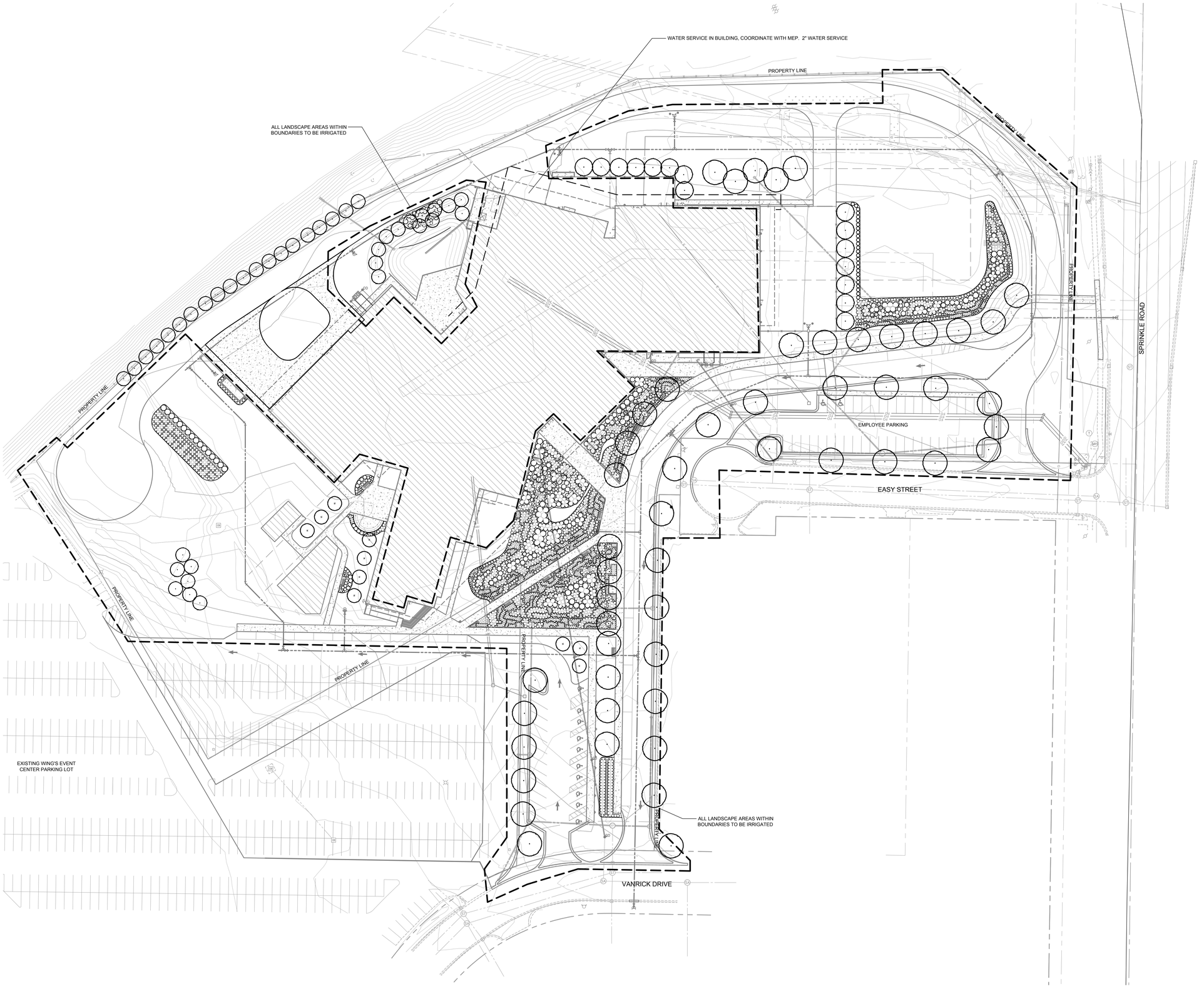
SITE LANDSCAPE PLAN
PLANTING SCHEDULE

JOB No. 214175

L2.4



0 40 60 80

1 inch = 40 ft.

NOTES

1. ALL LANDSCAPE AREAS INDICATED TO BE SERVED BY AN AUTOMATIC IRRIGATION SYSTEM.
2. TURFGRASS SHALL BE COVERED BY SPRAY HEADS AND ROTORS
3. PLANTING BEDS TO BE COVERED BY DRIP IRRIGATION

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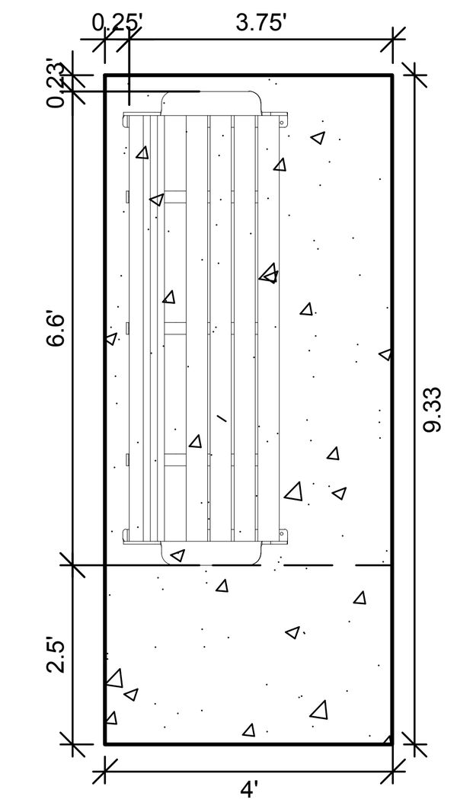
REVISIONS

DATE: JULY 2022
SCALE: 1" = 40'

SITE IRRIGATION PLAN

JOB No. 214175

L3.1



NOTES

THE SURFACE AROUND THE ACCESSIBLE BENCH MUST BE FIRM AND STABLE.

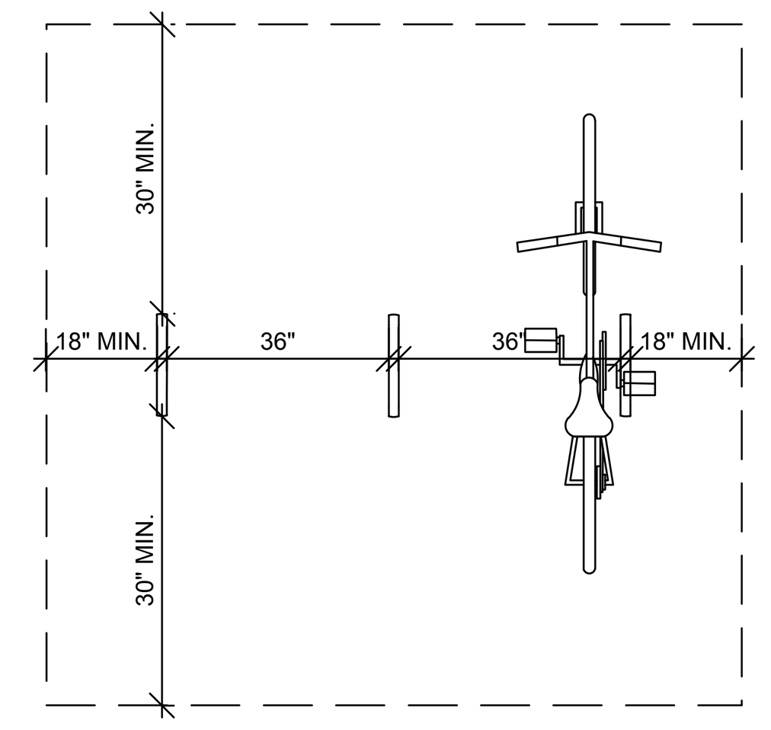
A MINIMUM AREA OF 30" BY 48" MUST BE PROVIDED AT ONE END OF THE FIXED BENCH SO THAT A WHEELCHAIR USER MAY BE SEATED SHOULDER TO SHOULDER WITH AN INDIVIDUAL SEATED ON THE BENCH

CLEAR SPACES MUST HAVE A SLOPE THAT DOES NOT EXCEED 2% IN ANY DIRECTION

BENCH CLEAR SPACE MUST NOT ENCROACH INTO ACCESSIBLE ROUTE

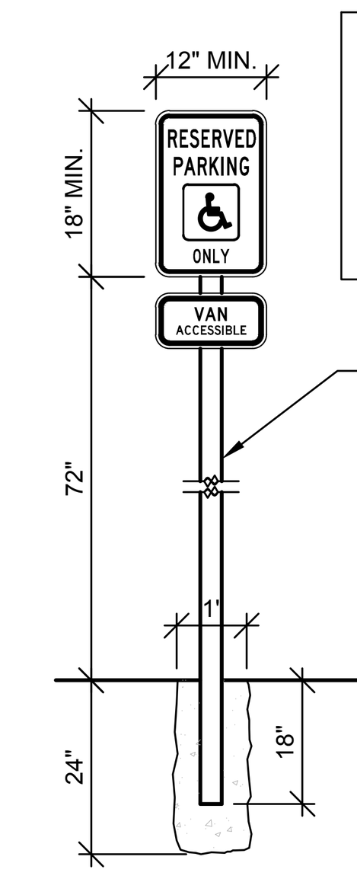
FIXED BENCH CLEAR AREA

-NOT TO SCALE-



BIKE RACK CLEAR AREA

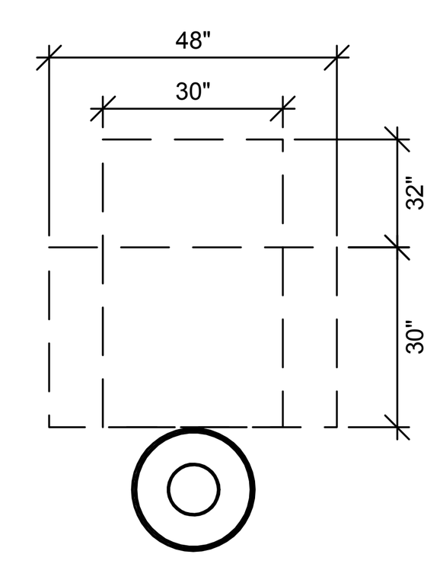
-NOT TO SCALE-



PROVIDE (2) BARRIER FREE, VAN ACCESSIBLE SIGNS. LOCATE AT BARRIER FREE PARKING SPACES AS SHOWN ON PLANS. SIGNS MUST COMPLY WITH STATE BARRIER FREE REQUIREMENTS AND THE A.D.A.

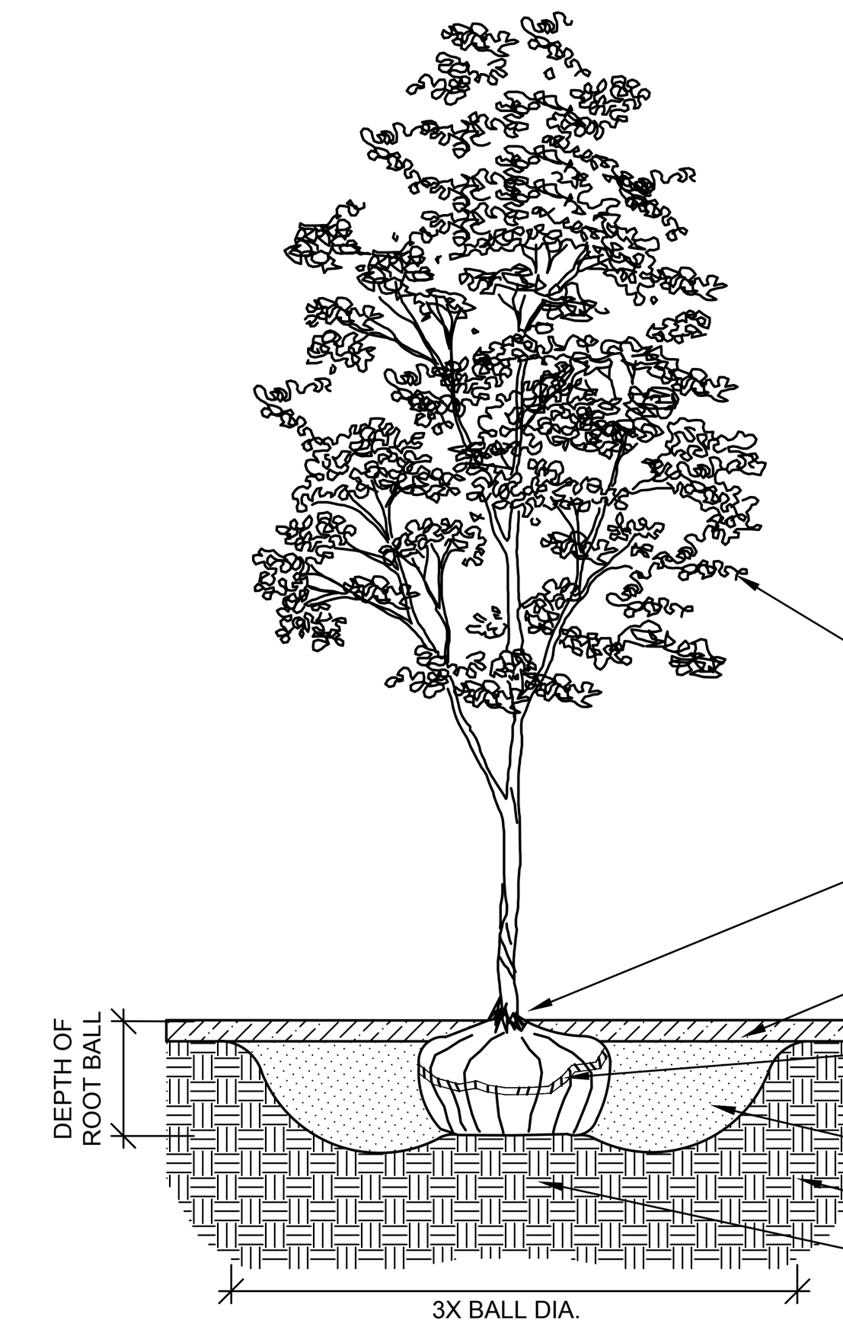
BARRIER FREE PARKING SIGN

SCALE: NONE



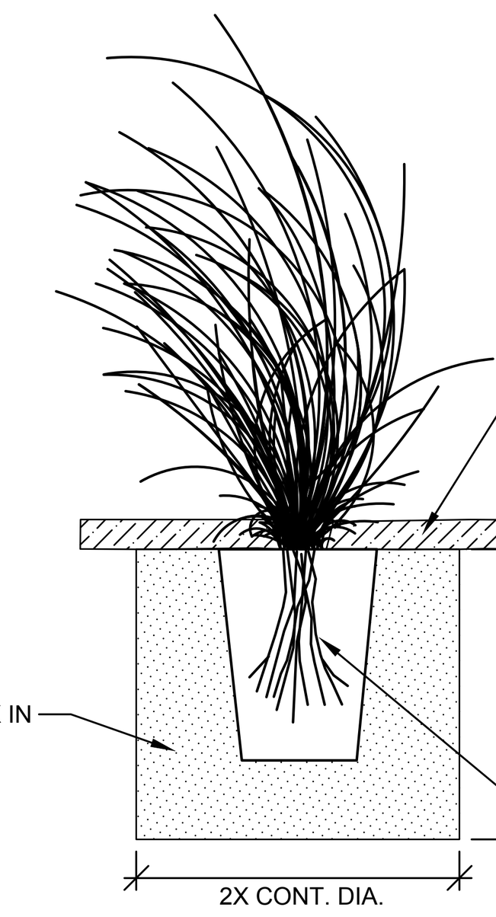
TRASH RECEPTACLE CLEAR AREA

-NOT TO SCALE-



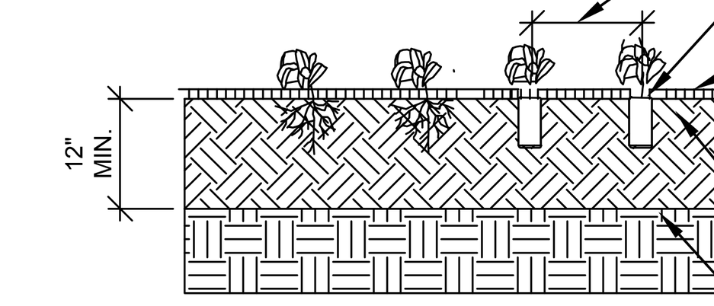
TREE/SHRUB PLANTING SECTION

-NOT TO SCALE-



SHRUB PLANTING SECTION

-NOT TO SCALE-



NOTE:
ALL PLANTS SHALL BE INSTALLED WITH TRIANGULAR SPACING.

PERENNIAL PLANTING SECTION

-NOT TO SCALE-

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02	8/10/2022	ISSUED FOR SITE PLAN REVIEW	PDS
01	8/1/2022	ISSUED FOR BIDDING	PDS

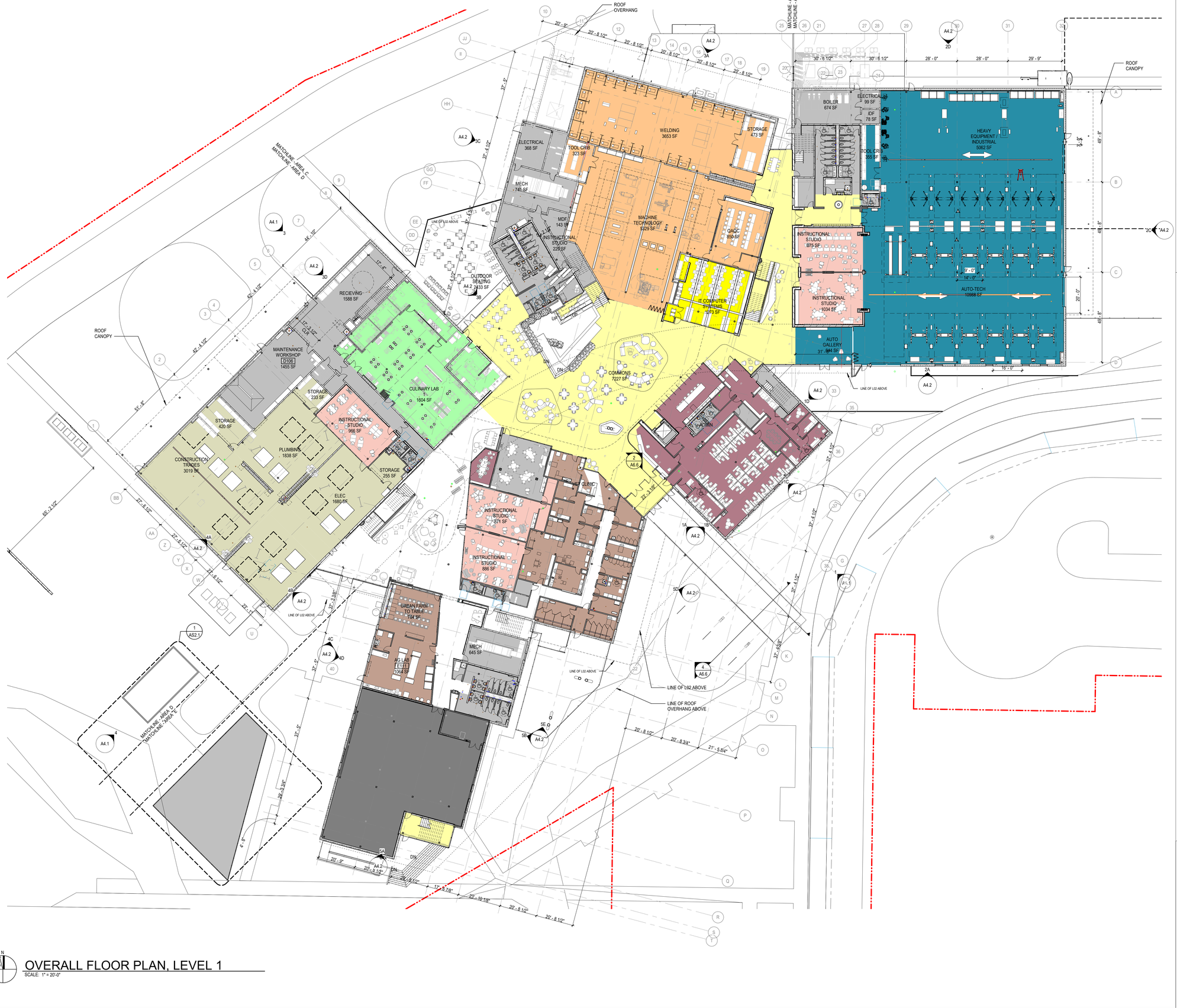
REVISIONS

DATE: JULY 2022
SCALE: 1" = 40'

LANDSCAPE DETAILS

JOB No. 214175

L4.1



OVERALL FLOOR PLAN, LEVEL 1

SCALE: 1" = 20'-0"

GENERAL ARCHITECTURAL NOTES

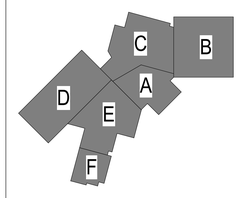
1. ALL INTERIOR CMU WALLS SHALL BE 8 INCHES NOMINAL THICKNESS, UNLESS NOTED OTHERWISE.
2. WALL TYPES SHALL BE DESIGNATED ON FLOOR PLANS THUS: XX.X.XX. SEE SHEET XX.X FOR WALL TYPES. ALL INTERIOR PARTITIONS ARE WALL TYPE XX.X.XX UNLESS NOTED OTHERWISE.
3. ALL MASONRY WALLS AND INTERIOR STUD WALLS SHALL EXTEND TO UNDERSIDE OF FLOOR OR ROOF DECK ABOVE UNLESS NOTED OTHERWISE. SEE REFLECTED CEILING PLAN NOTES.
4. PROVISIONS SHALL BE MADE AT ALL FULL HEIGHT NON-BEARING WALLS FOR 1-INCH VERTICAL MOVEMENT OF THE BUILDING STRUCTURE WITHOUT TRANSFER OF COMPRESSIVE LOADS TO WALL. FILL IRREGULARITIES BETWEEN TOP OF WALL AND DECK ABOVE WITH MINERAL WOOL INSULATION OR FIRE STOPPING MATERIALS AS REQUIRED TO MEET FIRE RATING OF RESPECTIVE WALLS. SEE DETAILS ON SHEET XX.X.
5. SEE STRUCTURAL DRAWINGS FOR BRACING OF NON-LOAD BEARING MASONRY WALLS.
6. FURNISH AND INSTALL FIRE-TREATED WOOD BLOCKING OR METAL BACKING PLATE IN METAL STUD PARTITIONS FOR THE PROPER ANCHORAGE OF ALL WALL ATTACHED ITEMS; I.E. TOILET ACCESSORIES, CASEWORK, MILLWORK, WALL-MOUNTED FIXTURES, MARKER BOARDS, TACK BOARDS, DOOR STOPS, AUDIO VISUAL BRACKETS, AND OTHER WALL ATTACHED ITEMS.
7. GYPSUM BOARD SURFACES SHALL BE ISOLATED WITH CONTROL JOINTS WHERE SHOWN ON DRAWINGS AND AS DESCRIBED IN THE SPECIFICATIONS.
8. MASONRY CONTROL JOINTS (CJ) AND CONTROL JOINTS ABOVE (CJA) SHALL BE LOCATED AS SHOWN ON THE FLOOR PLAN AND BUILDING ELEVATIONS, AND WHERE LARGE PLUMBING VENTS OR RISERS OCCUR IN SINGLE WYTHE MASONRY WALLS, AND WHERE MASONRY WALLS BEARING ON THE CONCRETE FLOOR SLAB ABUT MASONRY WALLS BEARING ON CONCRETE FOOTINGS OR AS INDICATED ON DRAWINGS.
9. "MBD" AND "TBD" INDICATE MARKER BOARDS AND TACK BOARDS ON PLANS. THE LENGTH PRECEDES THE DESIGNATION (EXAMPLE 16' MBD). ALL BOARDS ARE 4'-0" TALL. SEE WALL ELEVATIONS OR SPECIFICATIONS FOR MOUNTING HEIGHT.
10. EXTEND FURRING CHANNELS AND GYPSUM BOARD UP 4 INCHES ABOVE FINISHED CEILING ON CMU WALLS.
11. SCRIBE GYPSUM WALL BOARD OF WALLS AND PARTITIONS TO IRREGULARITIES OF DECK ABOVE. SEAL TIGHTLY AROUND ALL PENETRATIONS.
12. PROVIDE SEISMIC BRACING FOR SUSPENDED CEILINGS OR AS SHOWN ON THE DRAWINGS.

REFERENCE KEYNOTES

SHEET NOTES

1 PLAN SHEET NOTE 1
2 PLAN SHEET NOTE 2
3 PLAN SHEET NOTE 3

KEY PLAN



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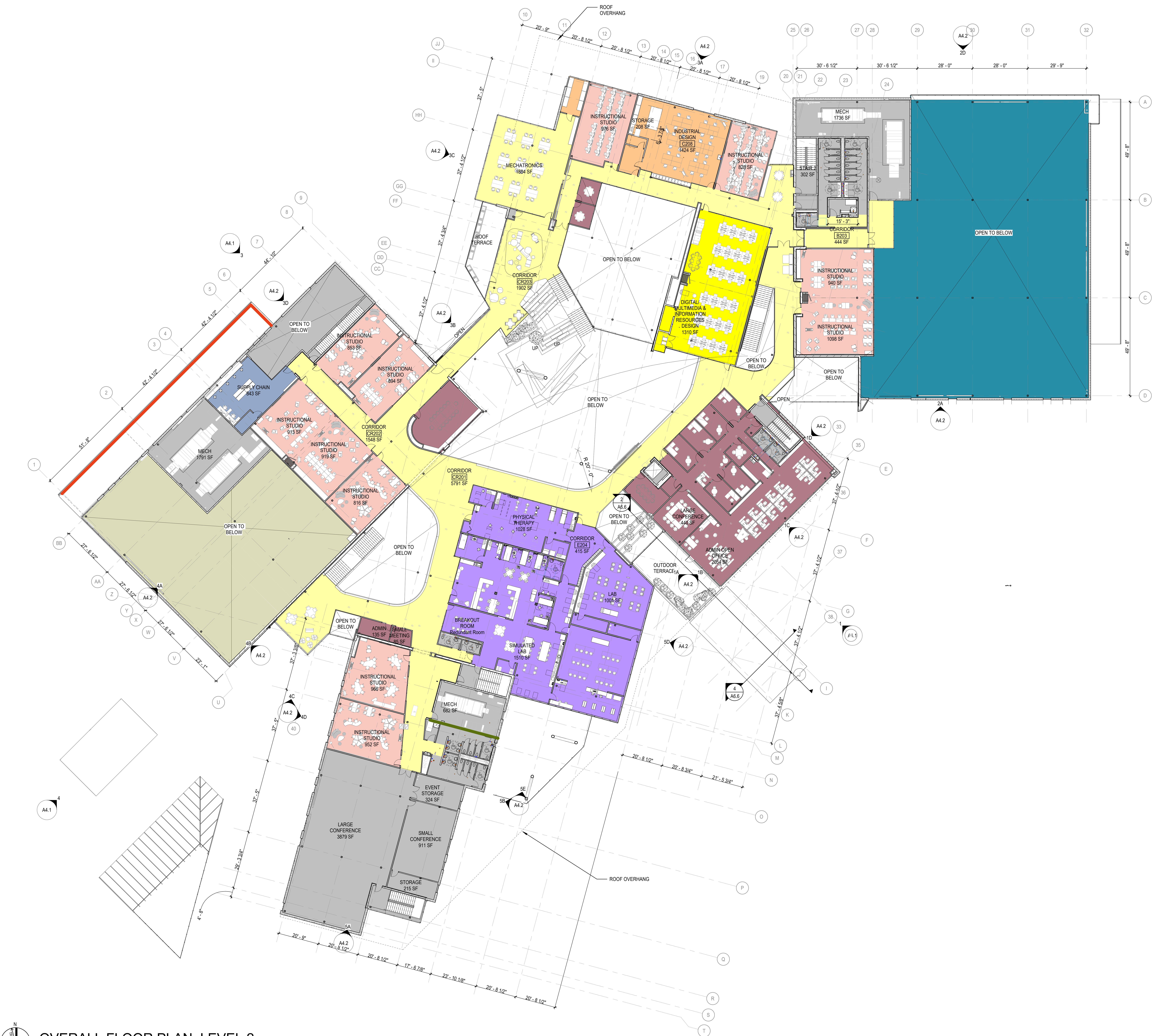
REVISIONS

DATE: 5 AUG 22
SCALE: As indicated

OVERALL FIRST FLOOR PLAN

JOB NO: 214175

A1.1



OVERALL FLOOR PLAN, LEVEL 2

SCALE: 1" = 20'-0"

GENERAL ARCHITECTURAL NOTES

1. ALL INTERIOR CMU WALLS SHALL BE 8 INCHES NOMINAL THICKNESS, UNLESS NOTED OTHERWISE.
2. WALL TYPES SHALL BE DESIGNATED ON FLOOR PLANS THUS: (XX. X. XX) SEE SHEET XX.X FOR WALL TYPES. ALL INTERIOR PARTITIONS ARE WALL TYPE XX.X.XX UNLESS NOTED OTHERWISE.
3. ALL MASONRY WALLS AND INTERIOR STUD WALLS SHALL EXTEND TO UNDERSIDE OF FLOOR OR ROOF DECK ABOVE UNLESS NOTED OTHERWISE. SEE REFLECTED CEILING PLAN NOTES.
4. PROVISIONS SHALL BE MADE AT ALL FULL HEIGHT NON-BEARING WALLS FOR 1-INCH VERTICAL MOVEMENT OF THE BUILDING STRUCTURE WITHOUT TRANSFER OF COMPRESSIVE LOADS TO WALL. FILL IRREGULARITIES BETWEEN TOP OF WALL AND DECK ABOVE WITH MINERAL WOOL INSULATION OR FIRE STOPPING MATERIALS AS REQUIRED TO MEET FIRE RATING OF RESPECTIVE WALLS. SEE DETAILS ON SHEET XX.X.
5. SEE STRUCTURAL DRAWINGS FOR BRACING OF NON-LOAD BEARING MASONRY WALLS.
6. FURNISH AND INSTALL FIRE-TREATED WOOD BLOCKING OR METAL BACKING PLATE IN METAL STUD PARTITIONS FOR THE PROPER ANCHORAGE OF ALL WALL ATTACHED ITEMS; I.E. TOILET ACCESSORIES, CASEWORK, MILLWORK, WALL-MOUNTED FIXTURES, MARKER BOARDS, TACK BOARDS, DOOR STOPS, AUDIO VISUAL BRACKETS, AND OTHER WALL ATTACHED ITEMS.
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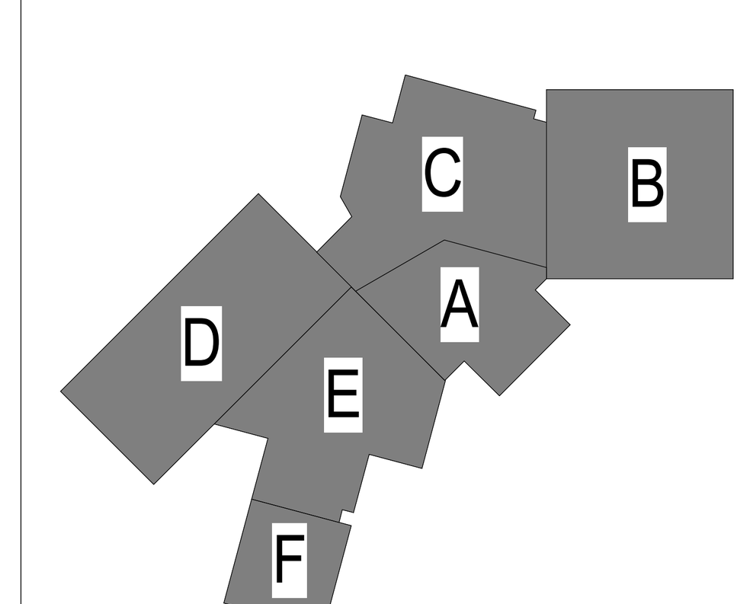
9. "MBD" AND "TBD" INDICATE MARKER BOARDS AND TACK BOARDS ON PLANS. THE LENGTH PRECEDES THE DESIGNATION (EXAMPLE 16' MBD). ALL BOARDS ARE 4'-0" TALL. SEE WALL ELEVATIONS OR SPECIFICATIONS FOR MOUNTING HEIGHT.
10. EXTEND FURRING CHANNELS AND GYPSUM BOARD UP 4 INCHES ABOVE FINISHED CEILING ON CMU WALLS.
11. SCRIBE GYPSUM WALL BOARD OF WALLS AND PARTITIONS TO IRREGULARITIES OF DECK ABOVE. SEAL TIGHTLY AROUND ALL PENETRATIONS.
12. PROVIDE SEISMIC BRACING FOR SUSPENDED CEILINGS OR AS SHOWN ON THE DRAWINGS.

REFERENCE KEYNOTES

SHEET NOTES

1. PLAN SHEET NOTE 1
2. PLAN SHEET NOTE 2
3. PLAN SHEET NOTE 3

KEY PLAN



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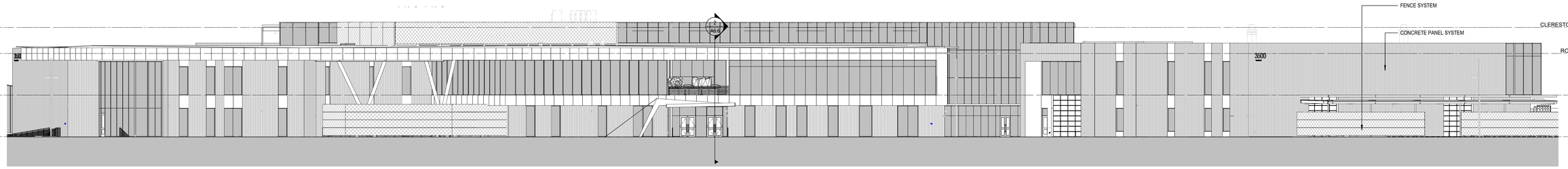
BIM 360://24-21104-00 KRESA Programming & Concepts/24-21104-10_KRESA Programming & Concepts_AR_2020.rvt
8/5/2022 3:45:05 PM

DATE: 5 AUG 22
SCALE: As indicated

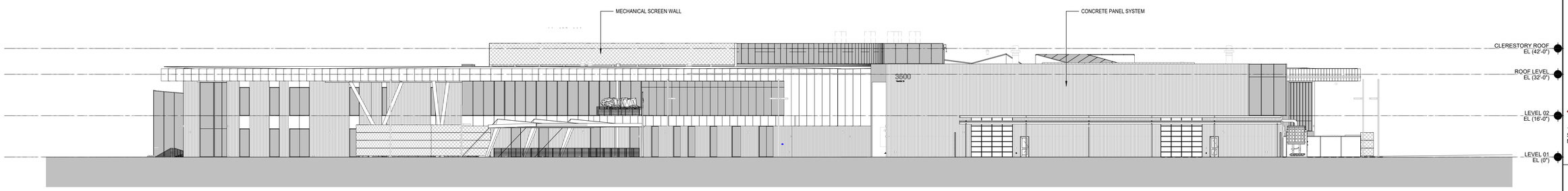
OVERALL SECOND FLOOR

JOB NO: 214175

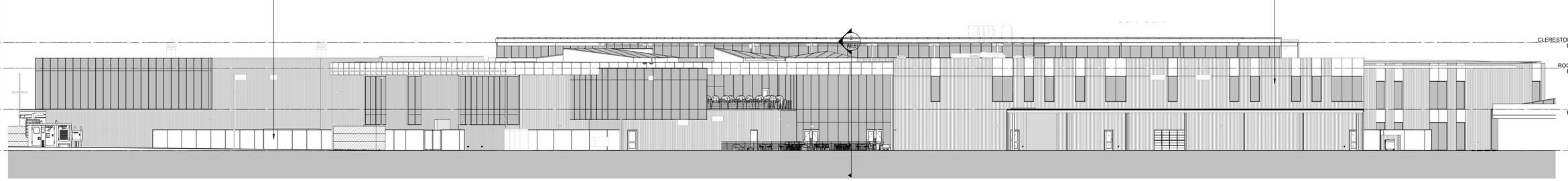
A1.2



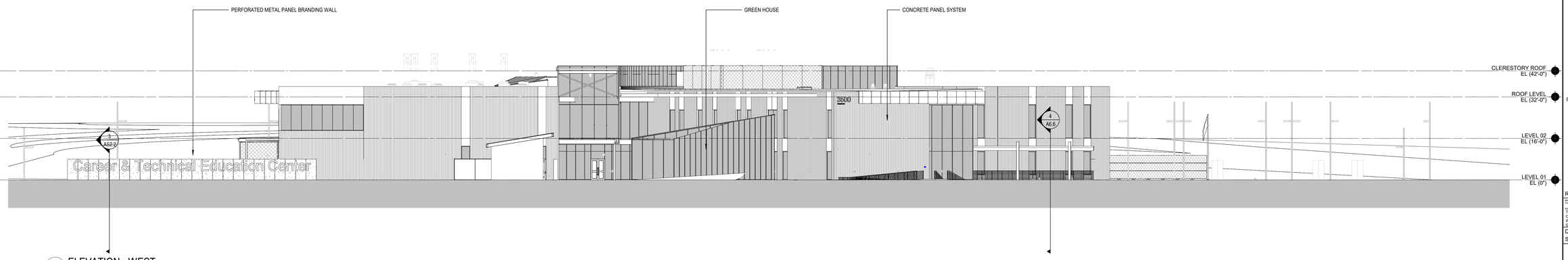
1 ELEVATION - SOUTH
A4.1 SCALE: 1/16" = 1'-0"



2 ELEVATION - EAST
A4.1 SCALE: 1/16" = 1'-0"



3 ELEVATION - NORTH
A4.1 SCALE: 1/16" = 1'-0"



4 ELEVATION - WEST
A4.1 SCALE: 1/16" = 1'-0"

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

EXTERIOR ELEVATIONS

JOB NO: 214175
A4.1

A B C D E F

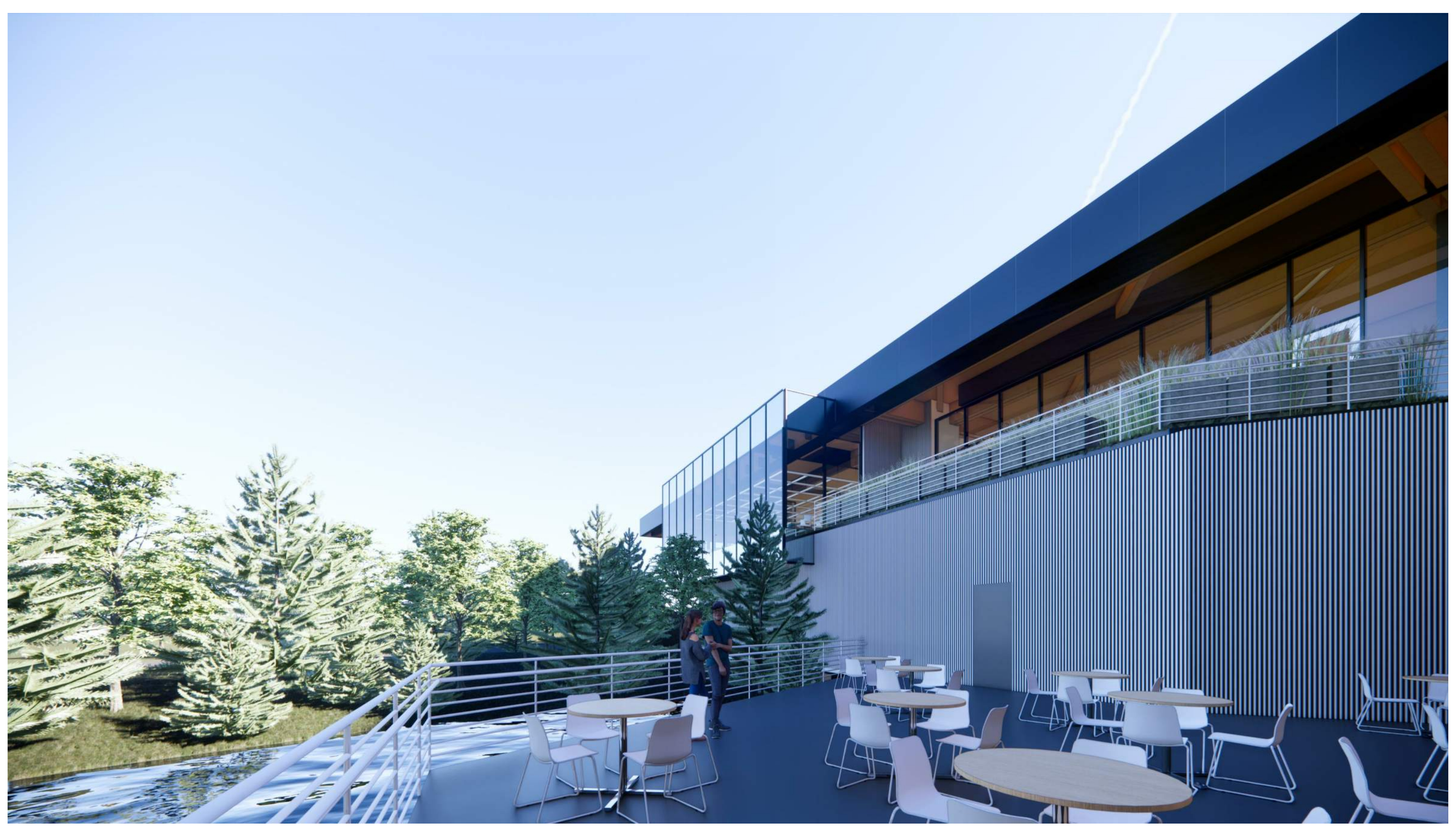
1

2

3

4

5



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8/5/2022 3:46:08 PM

DATE: 5 AUG 22

SCALE:

EXTERIOR PERSPECTIVES

JOB NO: 214175

G2.2

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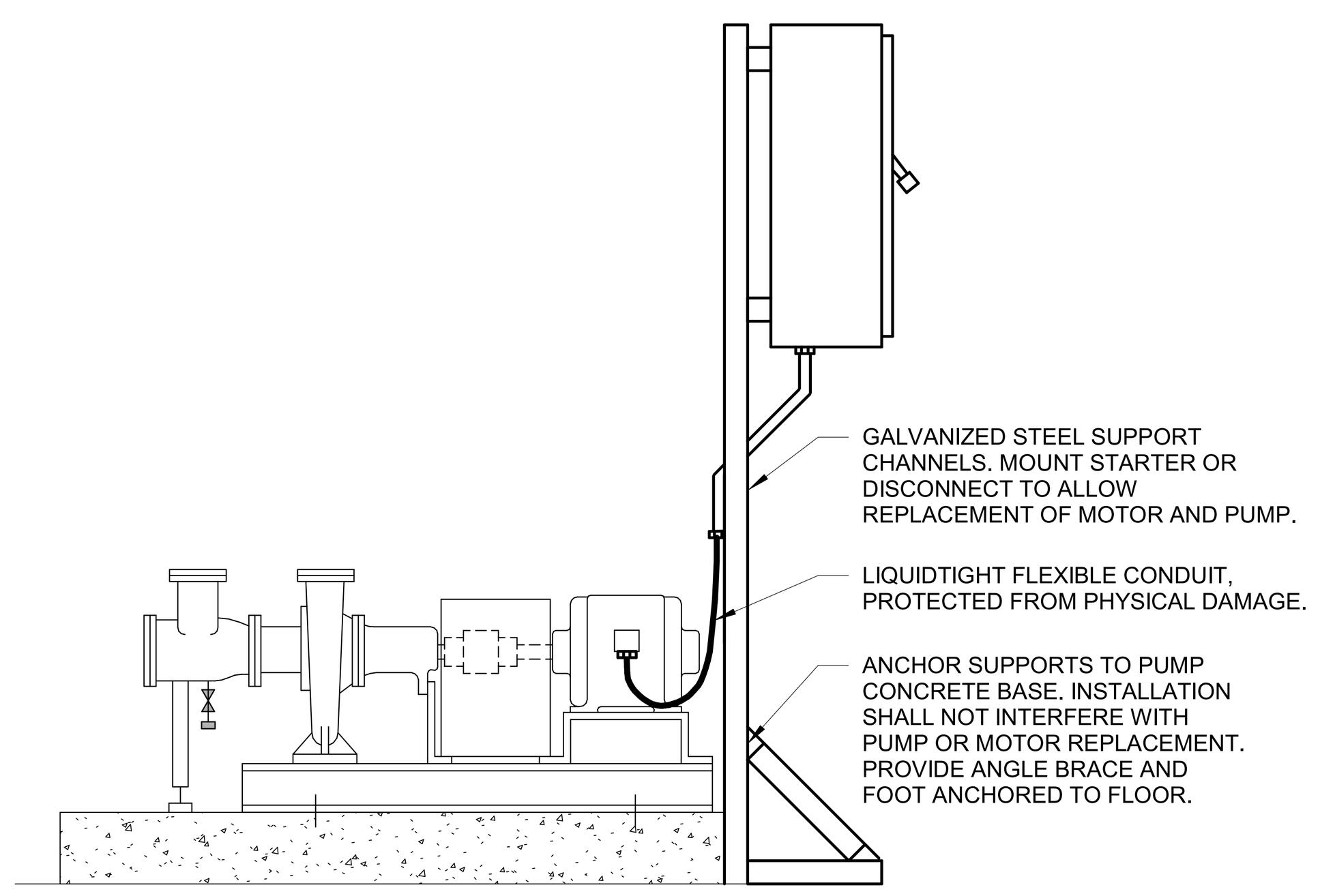
DATE: 5 AUG 22

SCALE:

INTERIOR PERSPECTIVES

JOB NO: 214175

G2.3



1 PUMP CONNECTION DETAIL
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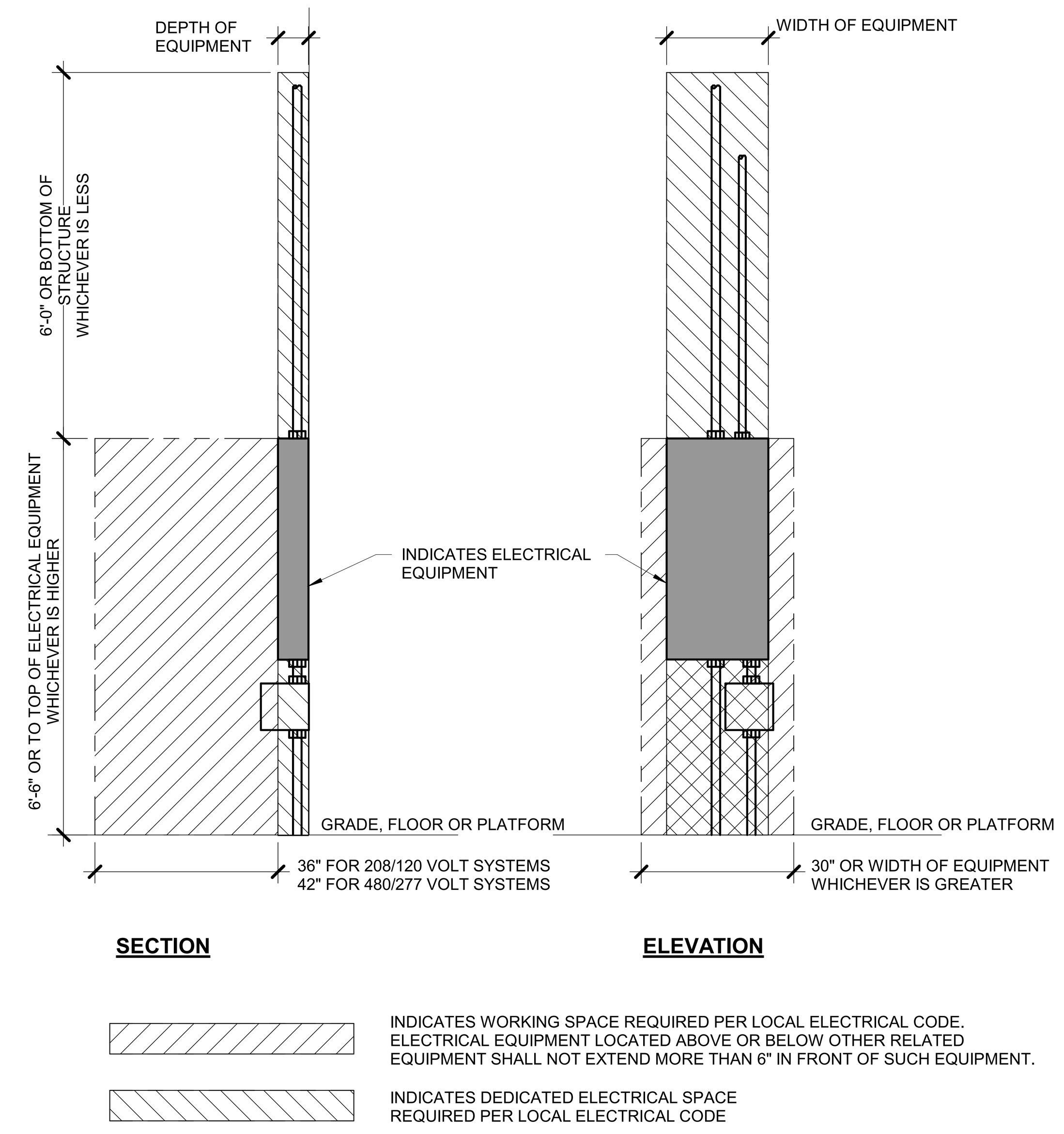

2 ELECTRICAL EQUIPMENT CLEARANCES
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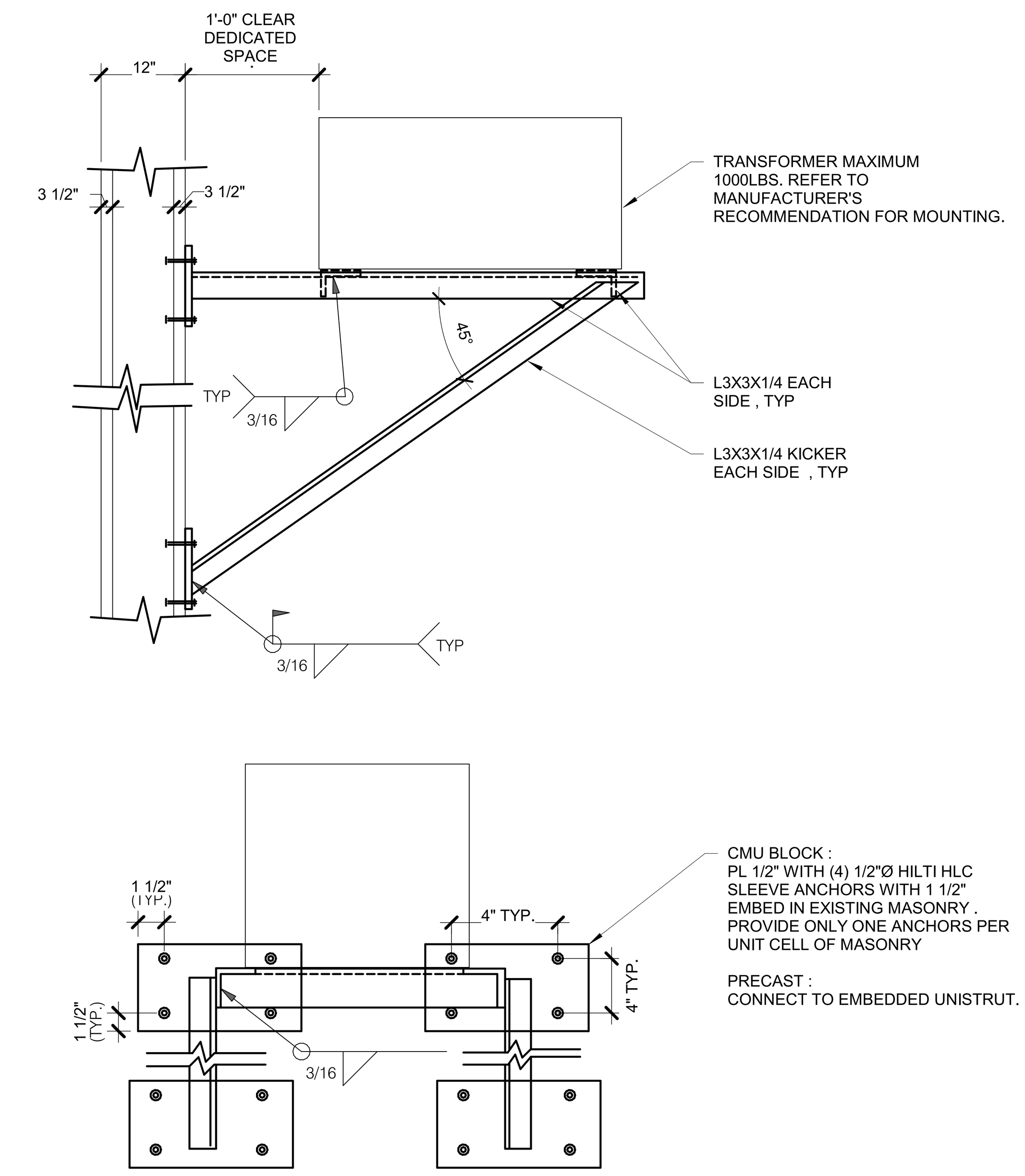
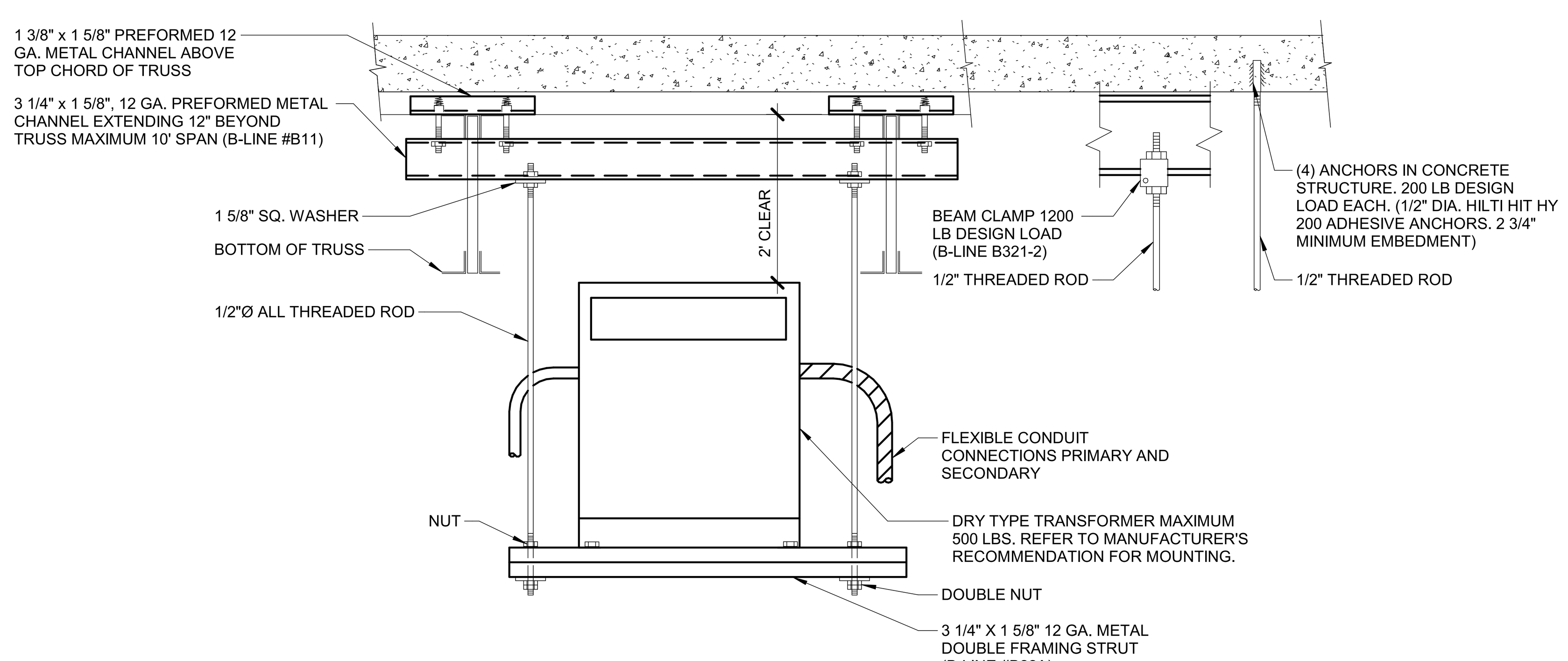


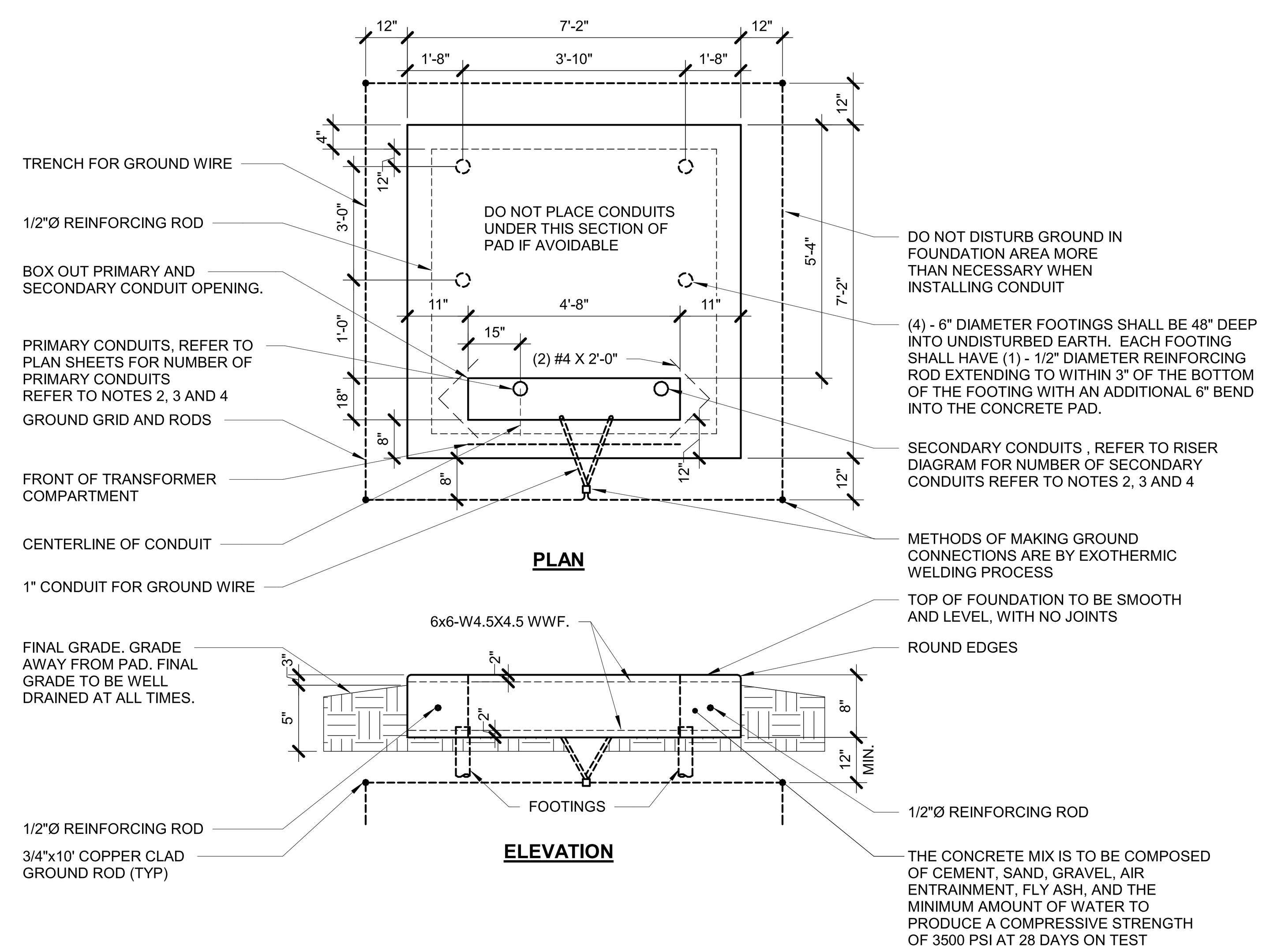
3 TRANSFORMER PLATFORM DETAIL
NO SCALE



4 TRANSFORMER MOUNTING TRAPEZE
NO SCALE

NOTES:

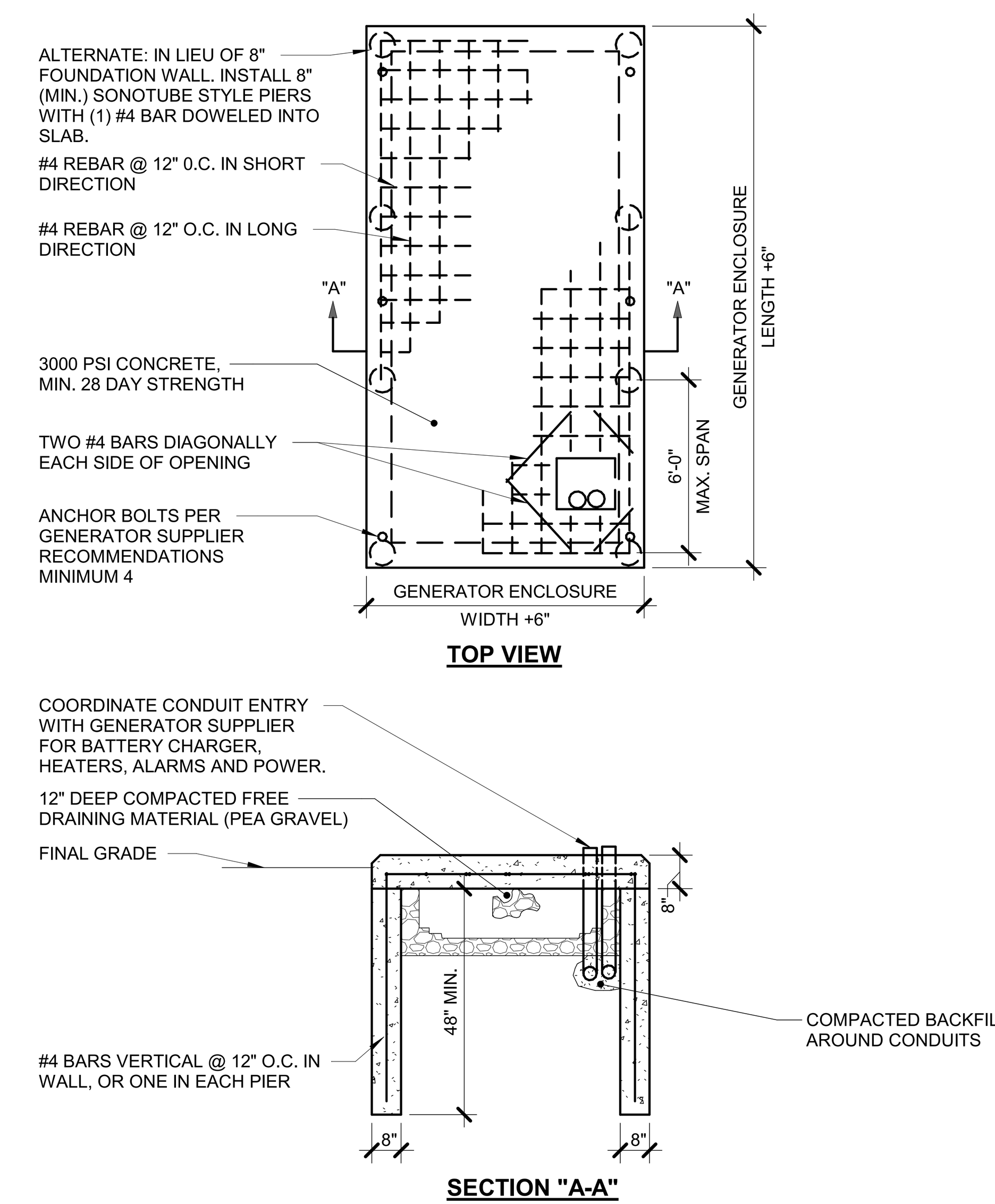
1. (2) - HANGER ASSEMBLIES SHALL BE REQUIRED FOR EACH TRANSFORMER.



5 CONCRETE PAD DETAIL
NO SCALE

NOTES:

1. E.C. SHALL COORDINATE TRANSFORMER PAD DIMENSIONS WITH APPROVED TRANSFORMER SHOP DRAWINGS.
2. AFTER PRIMARY AND SECONDARY CONDUITS ARE IN PLACE, BACK FILL WITH CLEAN, BLACK DIRT, FILLED AND TAMPED IN 6" LIFTS, BEFORE POURING FOUNDATION. SAND BACK FILL NOT ACCEPTABLE.
3. PRIMARY AND SECONDARY CONDUIT MUST COME THROUGH FOUNDATION IN DESIGNATED AREAS.
4. TERMINATE CONDUITS 2 INCHES ABOVE TOP OF FOUNDATION, BUT BELOW TOP OF SLAB.



NOTES:

1. COORDINATE PAD DIMENSIONS WITH GENERATOR SUPPLIER PRIOR TO START OF CONSTRUCTION.

6 GENERATOR PAD DETAIL
NO SCALE

FOR REVIEW ONLY
NOT FOR
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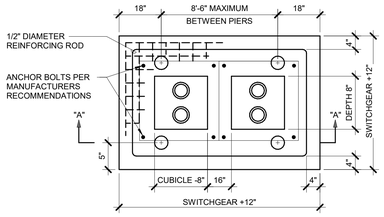
01	8/1/2022	ISSUED FOR BIDDING	PDS

REVISIONS

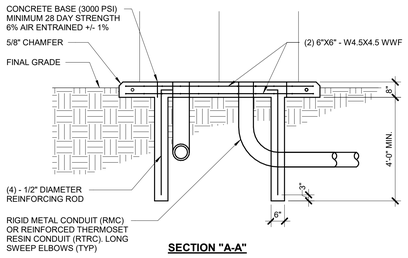
DATE: 25 MAR 2022
SCALE: 12" = 1'-0"

ELECTRICAL DETAILS

JOB NO: 214175
E6.2



TOP VIEW

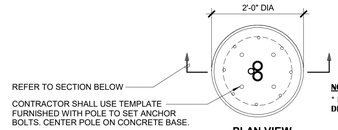


SECTION "A-A"

NOTES:

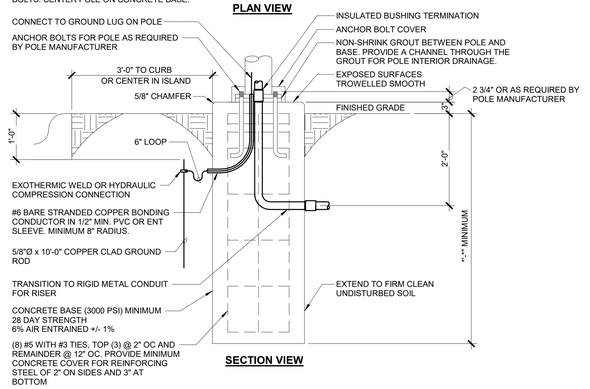
1. VERIFY FINAL PAD DIMENSIONS WITH APPROVED SWITCHGEAR SHOP DRAWINGS.

1 SWITCHGEAR PAD DETAIL
NO SCALE



PLAN VIEW

NOTES TO SPECIFIER:
*** DESIGNER MUST RUN POLE BASE CALCULATION TO VERIFY POLE BASE DIMENSIONS. STRUCTURAL ENGINEER ON PROJECT SHALL REVIEW.**



SECTION VIEW

2 POLE BASE DETAIL
NO SCALE

NOTES TO SPECIFIER:
*** optional form provides reflective finished surface.**

NOTES TO SPECIFIER:
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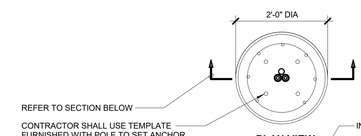
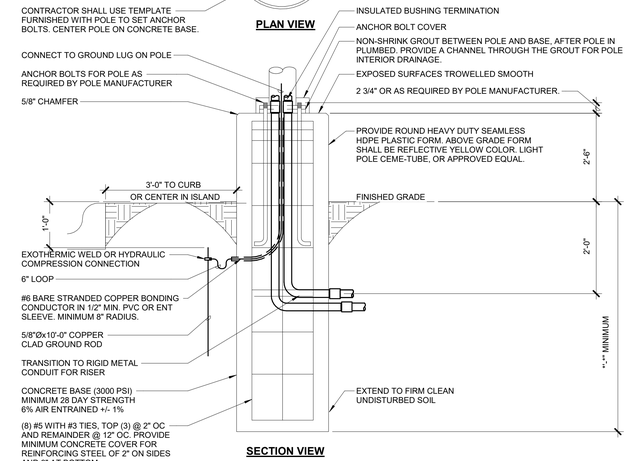
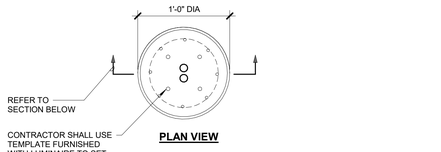


PLAN VIEW

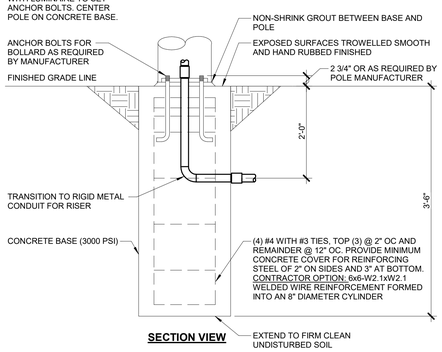


SECTION VIEW

3 EXTENDED POLE BASE DETAIL
NO SCALE

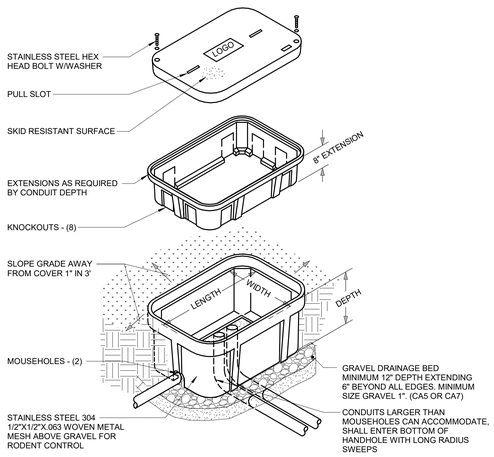


PLAN VIEW



SECTION VIEW

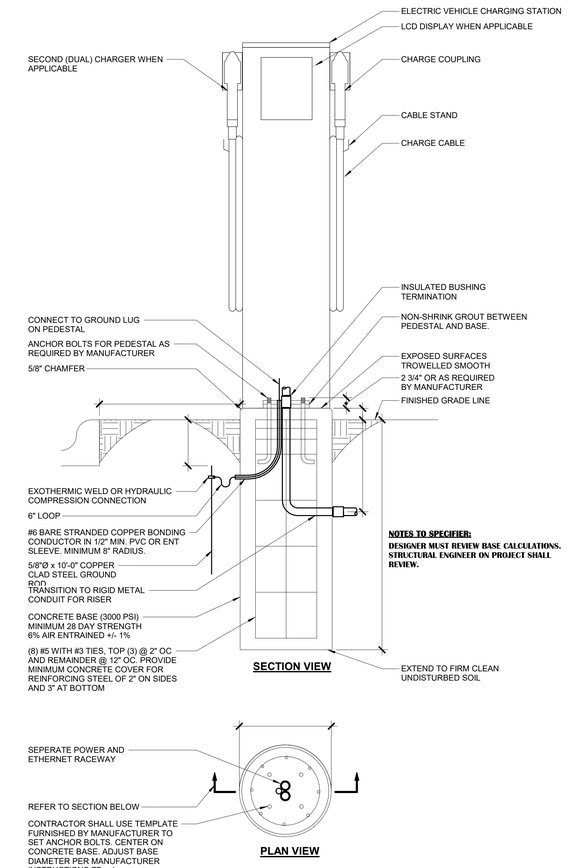
4 BOLLARD BASE DETAIL
NO SCALE



NOTES:

1. ALL DIMENSIONS ARE NOMINAL INSIDE CLEARANCES.
2. ANY SPLICES OR DEVICES IN HANDHOLE SHALL BE SUBMERGIBLE.
3. [SEAL ALL CONDUIT ENDS WITH DUCTSEAL]

5 EXTERIOR HANDHOLE DETAIL
NO SCALE



NOTES TO SPECIFIER:
DESIGNER MUST REVIEW BASE CALCULATIONS. STRUCTURAL ENGINEER ON PROJECT SHALL REVIEW.

SECTION VIEW

PLAN VIEW

6 ELECTRIC VEHICLE PEDESTAL CHARGING STATION DETAIL
NO SCALE

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REFERENCE SCALE IN INCHES
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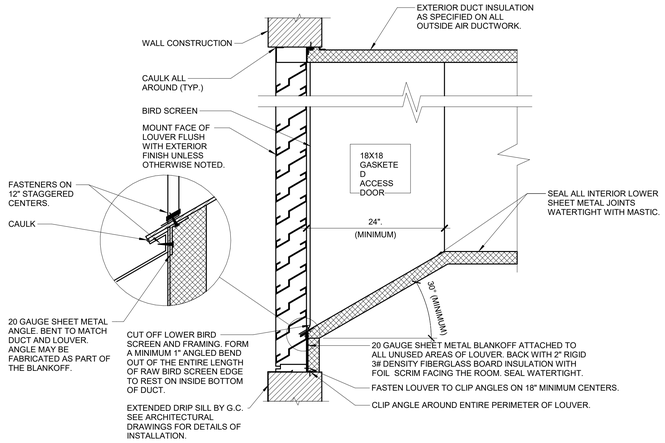
REVISIONS

DATE: 25 MAR 2022
SCALE: 12" = 1'-0"

ELECTRICAL DETAILS

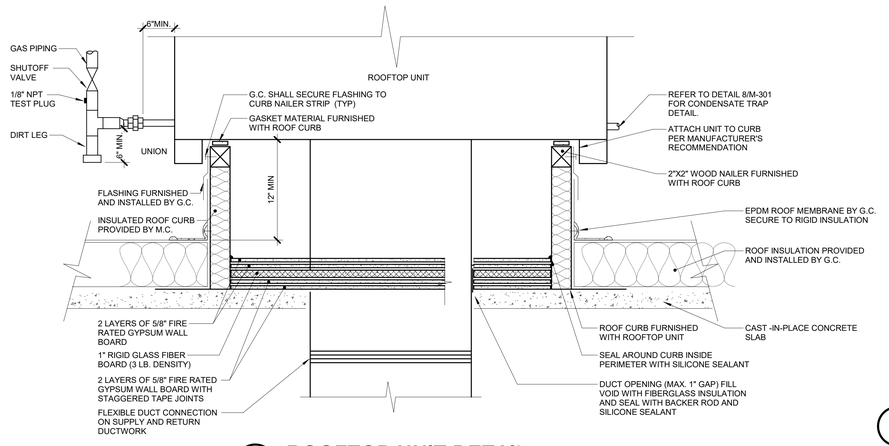
JOB NO: 214175
E6.3



1 LOUVER INSTALLATION DETAIL
NO SCALE

NOTES:

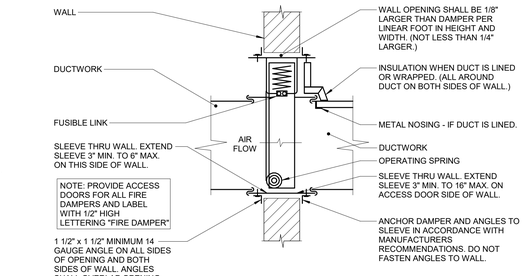
1. SEAL ALL JOING ON BOTTOM INTERIOR SURFACE OF DUCT WITHIN 6'-0" OF THE LOUVER WATER TIGHT.
2. MOUNT BOTTOM OF INTAKE LOUVERS AT LEAST 40" ABOVE GRADE OR ROOF ELEVATION TO MINIMIZE CHANCES OF SNOW DRIFTING INTO THE LOUVER.
3. CAULK SHEETMETAL SCREWS WHERE THE PENETRATE METAL.



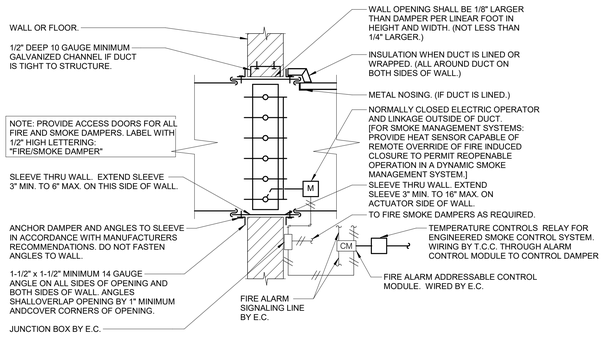
2 ROOFTOP UNIT DETAIL
NO SCALE

NOTES:

1. ALL ROOF FLASHING SHALL BE PER ROOF MANUFACTURER'S RECOMMENDATIONS.
2. ROOF CURB SHALL BE INSTALLED PER ROOF CURB MANUFACTURER'S RECOMMENDATIONS.
3. PROVIDE EXTENDED CURB AS REQUIRED TO MAINTAIN 12" CLEARANCE ABOVE INSULATION.



3 FIRE DAMPER THRU WALL DETAIL (TYPE B)
NO SCALE



4 COMBINATION FIRE & SMOKE DAMPER (ELECTRIC)
NO SCALE

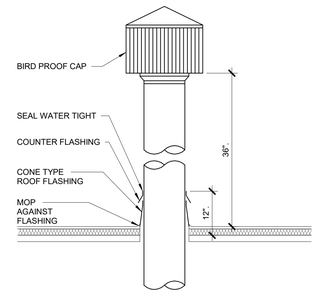
NOTES:

1. CONNECTION OF DAMPER TO SLEEVE SHALL BE AS SHOWN IN FIGURE 1 OF SMACNA "FIRE DAMPER AND HEAT STOP GUIDE FOR AIR HANDLING SYSTEMS", SECOND EDITION.
2. DAMPER CLOSES BY SPRING ACTION IN EVENT OF HIGH TEMPERATURE.
3. FLOOR MOUNTED DAMPER SIMILAR WITH ACTUATOR ON SIDE WITH ACCESS DOOR.
4. WHERE DUCT SMOKE DETECTORS CANNOT BE ACCESSED BY THE DAMPER ACCESS DOOR THE ELECTRICAL CONTRACTOR SHALL FURNISH A DUCT ACCESS DOOR FOR THE DETECTOR. THE MECHANICAL CONTRACTOR SHALL INSTALL THE DOOR IN THE DUCT.
5. SEE FIRE/SMOKE DAMPER WIRING SCHEMATIC DETAIL ON ELECTRICAL DRAWINGS FOR WIRING DETAILS. REFER TO ELECTRICAL DRAWINGS FOR FSD/CM LOCATIONS.

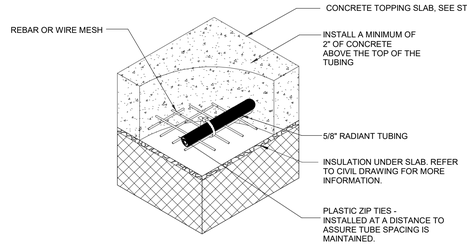
REAR VIEW

SIDE VIEW

5 COMBINED COMBUSTION AIR/FLUE DETAIL
NO SCALE



7 COMBUSTION AIR STACK THROUGH ROOF
NO SCALE

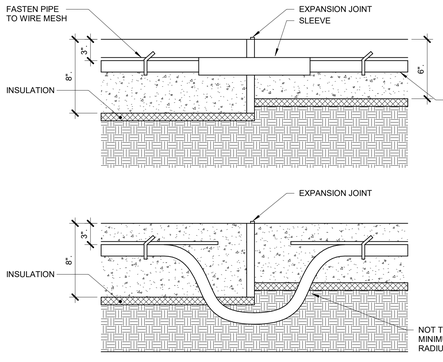


8 SNOWMELT SYSTEM
NO SCALE

6 FLUE STACK THROUGH ROOF
NO SCALE

NOTES:

1. MAINTAIN A MINIMUM 1" CLEARANCE ABOVE FLASHING COLLAR TO ALLOW FOR VENTILATION OF HEAT.
2. SEALANT GOOD TO 250°F, ALL TEMPERATURES HIGHER SHALL BE SOLDER OR BRAZED



9 SNOW MELT PIPING FOR CHANGE IN SLAB THICKNESS DETAIL
NO SCALE

NOTES

1. EXPANSION JOINTS CAN BE INSTALLED IN SEVERAL WAYS, DEPENDING ON SLAB CONSTRUCTION REQUIREMENTS. IF A SLEEVED APPROACH IS TO BE USED, THE SLEEVE MUST EXTEND AT LEAST 6" TO EITHER SIDE OF THE JOINT.

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