

BOKUM ROAD BUSINESS PARK

BOKUM ROAD
ESSEX, CONNECTICUT

JULY 2021

PERMIT DRAWINGS

INLAND WETLANDS AND WATERCOURSES COMMISSION SUBMISSION

PREPARED FOR:

GEORGE C. FIELD COMPANY, INC.

PREPARED BY:

Summer Hill

Civil Engineers & Land Surveyors, P.C.
60 Wall Street
P.O. Box 708
Madison, Connecticut 06443-0708
Telephone: (203) 245-0722

OWNER

GEORGE C. FIELD COMPANY, INC.
P.O. BOX 24
ESSEX, CONNECTICUT 06426
860-767-0420

APPLICANT

GEORGE C. FIELD COMPANY, INC.
P.O. BOX 24
ESSEX, CONNECTICUT 06426
860-767-0420

SCHEDULE OF DRAWINGS

SHEET No.	TITLE
C0.1	TITLE SHEET
C0.2	GENERAL NOTES, ABBREVIATIONS AND LEGEND
C0.3	EROSION AND SEDIMENT CONTROL NOTES
C1.1	EXISTING CONDITIONS PLAN
C2.1	GENERAL PLAN
C2.2	SUBSURFACE SEWAGE DISPOSAL SYSTEM PLAN
C2.3	SITE LAYOUT PLAN
C3.1	DETAILS
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C3.5	DETAILS
C3.6	DETAILS
C3.7	CONNECTICUT DEPARTMENT OF TRANSPORTATION STANDARD DRAWINGS
C3.8	MASH W-BEAM HARDWARE
C3.9	METAL BEAM RAIL (R-B MASH) GUIDERAIL
	R-B END ANCHORAGE TYPE I AND II

ZONING STANDARDS SCHEDULE				
LIMITED INDUSTRIAL (LI) DISTRICT				
SECTION	STANDARD	REQUIRED	EXISTING	PROVIDED
90E.	MINIMUM LOT AREA	80,000 SF	388,259 SF	388,259 SF
90E.	MINIMUM LOT WIDTH	200 FT	200 FT	200 FT
90E.	MINIMUM SETBACKS ⁽¹⁾			
	FRONT	75 FT	-	-
	SIDE	25 FT	-	35.5 FT
	REAR	50 FT	-	-
90E.	MAXIMUM BUILDING COVERAGE	25%	-	13%
90E.	MAXIMUM BUILDING HEIGHT	35 FT	-	24 FT

PARKING AND LOADING SPACE REQUIREMENTS:
 1 SPACE / EMPLOYEE X 30 EMPLOYEES = 30 PARKING SPACES
 1 TRUCK LOADING SPACE / 20,000 SF GROSS FLOOR AREA X 52,480 SF = 3 TRUCK LOADING SPACES

PARKING AND LOADING SPACES PROVIDED:
 52 PARKING SPACES
 3 TRUCK LOADING SPACES

NOTE:

1. NO SETBACK REQUIRED FROM A LOT LINE WHICH ABUTS A RAILROAD RIGHT-OF-WAY.



LOCATION PLAN

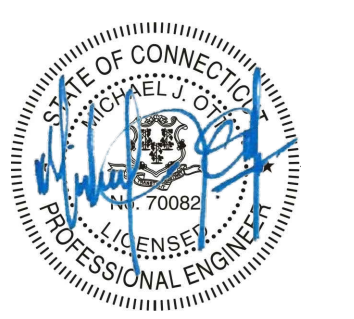
SCALE: 1"=1000'



SHEET No.: C0.1

MICHAEL J. OTT, P.E., L.S.
CT REGISTRATION No. 70082

DATE



ABBREVIATIONS

AC.	ACRE
ACP	ASBESTOS CEMENT PIPE
ACOMP	ASPHALT COATED CORRUGATED METAL PIPE
A.S.O.R.E.	AS ORDERED BY ENGINEER
B&B	BALLED & BURLAPPED
BIT.	BITUMINOUS
BM	BENCHMARK
B.O.F.	BOTTOM OF FOOTING
CATV	CABLE TELEVISION
CB	CATCH BASIN
C.C.	CENTER TO CENTER
C.C.S.	CONNECTICUT COORDINATE SYSTEM
CFS	CUBIC FEET PER SECOND
CHD	CONNECTICUT HIGHWAY DEPARTMENT
CIP	CAST IRON PIPE
CJ	CONSTRUCTION OR CONTRACTION JOINT
CL	CLEAR
C.L.&P.	CONNECTICUT LIGHT AND POWER
CMP	CORRUGATED METAL PIPE
CMU	CONCRETE MASONRY UNIT
CONC.	CONCRETE
CONT.	CONTINUOUS
CPEP	CORRUGATED POLYETHYLENE PIPE
C.Y.	CUBIC YARD
DBL.	DOUBLE
DH	DRILL HOLE
DI	DUCTILE IRON
DIA.	DIAMETER
DIP	DUCTILE IRON PIPE
EA.	EACH
EJ	EXPANSION JOINT
EL.	ELEVATION
E.O.B.	END OF BORING
EQP	EDGE OF PAVEMENT
EQ.	EQUAL
EX.	EXISTING
f' _c	MINIMUM COMPRESSIVE STRENGTH
f _y	YIELD STRENGTH OF STEEL REINFORCEMENT
F.F.	FINISH FLOOR
FM	FORCE MAIN
FND.	FOUND
FRP	FIBERGLASS REINFORCED PLASTIC
FT	FEET OR FOOT
GA.	GAUGE
GAL	GALLON
H	HORIZONTAL
HDPE	HIGH DENSITY POLYETHYLENE
HMA	HOT MIX ASPHALT
HTL	HIGH TIDE LINE
I.D.	INSIDE DIAMETER
INV.	INVERT
IP	IRON PIPE
KSF	KIPS PER SQUARE FOOT
L	LENGTH
LB	POUND
L.F.	LINEAR FEET
L.S.	LUMP SUM
LT	LEFT
LVC	LENGTH OF VERTICAL CURVE
MAX.	MAXIMUM
MH	MANHOLE
MIN.	MINIMUM
MON	MONUMENT
NIF	NOW OR FORMERLY
N.I.C.	NOT IN CONTRACT
NTS	NOT TO SCALE
O.C.	ON CENTER
O.D.	OUTSIDE DIAMETER
P.C.	POINT OF CURVATURE
P.C.C.	POINT OF COMPOUND CURVATURE
PE	PLAIN END OR POLYETHYLENE
P.I.	POINT OF INTERSECTION
P.R.C.	POINT OF REVERSE CURVATURE
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
P.T.	POINT OF TANGENCY
PVC	POLYVINYL CHLORIDE OR POINT OF VERTICAL CURVATURE
PVCC	POINT OF VERTICAL COMPOUND CURVATURE
PVI	POINT OF VERTICAL INTERSECTION
PVRC	POINT OF VERTICAL REVERSE CURVATURE
PVT	POINT OF VERTICAL TANGENCY
R	RADIUS
RCCE	REINFORCED CONCRETE CULVERT END
RCP	REINFORCED CONCRETE PIPE
R.O.W.	RIGHT-OF-WAY
R.R.	RAILROAD
RT	RIGHT
RW	RETAINING WALL
SAN	SANITARY
SCG	SOUTHERN CONNECTICUT GAS
SGH	SCHEDULE
SDR	STANDARD DIMENSION RATIO
S.F.	SQUARE FOOT
SNET	SOUTHERN NEW ENGLAND TELEPHONE
S.S.	STAINLESS STEEL
STA.	STATION
STD.	STANDARD
S.Y.	SQUARE YARD
T&B	TOP AND BOTTOM
T.F.	TOP OF FRAME
T.G.	TOP OF GRATE
T.O.F.	TOP OF FOOTING
T.O.W.	TOP OF WALL
TYP.	TYPICAL
U.I.	UNITED ILLUMINATING
V	VERTICAL
VCP	VITRIFIED CLAY PIPE
WF	WETLAND FLAG

PROPERTY LINE	—————
RIGHT-OF-WAY LINE	—————
EASEMENT LINE	—————
BASELINE	—————
ELEVATION CONTOUR	—————
ELEVATION	x 100.0
EDGE OF PAVEMENT	—————
CURBING	—————
GUIDE RAIL	—————
TREE LINE	—————
MAILBOX	—————
SIGN	—————
LIGHT POST	—————
UTILITY POLE (W/GLY)	—————
UTILITY POLE (W/LIGHT)	—————
HYDRANT	—————
CHAIN LINK FENCE	—————
WIRE FENCE	—————
WOOD FENCE	—————
STONE WALL	—————
HEDGEROW	—————
WATERCOURSE	—————
INLAND WETLAND BOUNDARY	—————
TIDAL WETLAND BOUNDARY	—————
COMMUNICATIONS	—————
ELECTRIC	—————
GAS MAIN/SERVICE	—————
WATER MAIN/SERVICE	—————
OVERHEAD UTILITY WIRE(S)	—————
SANITARY SEWER ≤ 12" DIAMETER	—————
SANITARY SEWER > 12" DIAMETER	—————
STORM SEWER ≤ 12" DIAMETER	—————
STORM SEWER > 12" DIAMETER	—————
CATCH BASIN	—————
MANHOLE	—————
SURVEY STATION	—————
TEST PIT	—————
BORING	—————
PROBE	—————
ASSESSOR'S MAP NO./LOT NO.	49-50 87B
SOIL TYPE	—————
SOIL TYPE BOUNDARY	—————
FLOODPLAIN BOUNDARY	—————
CLEARING LIMIT LINE	—————
LIMIT OF CUT	—————
LIMIT OF FILL	—————
PAVEMENT REMOVAL LINE	—————
SEDIMENTATION CONTROL BARRIER	—————
SEDIMENTATION CONTROL AT DRAINAGE STRUCTURE	—————
DECIDUOUS TREE	—————
CONIFEROUS TREE	—————
SHRUB	—————
TREE TO BE REMOVED	—————

EXISTING

PROPOSED

LEGEND

SOIL TYPE LEGEND

REFERENCE:
NATIONAL COOPERATIVE SOIL SURVEY DATA FOR THE STATE OF CONNECTICUT, U.S. DEPARTMENT OF AGRICULTURE, NATURAL RESOURCES CONSERVATION SERVICE

MAP UNIT SYMBOL	MAP UNIT DESCRIPTION
36B	WINDSOR LOAMY SAND, 3 TO 8 PERCENT SLOPES

GENERAL NOTES:

- THESE DRAWINGS ARE INTENDED TO BE USED FOR MUNICIPAL, STATE, AND/OR FEDERAL LAND USE AND ENVIRONMENTAL PERMITTING PURPOSES AND ARE NOT INTENDED TO BE USED AS CONSTRUCTION DOCUMENTS.
 - PROPERTY BOUNDARY, STREET LINE, AND PLANIMETRIC AND TOPOGRAPHIC INFORMATION DEPICTED HEREIN HAS BEEN REPRODUCED FROM THE FOLLOWING MAP:
"IMPROVEMENT LOCATION SURVEY PREPARED FOR HERBERT T. CLARK, III #37 BOKUM ROAD ESSEX, CONNECTICUT", SHEETS 1-2 OF 2, SCALE: 1"=40', DATE: 3-11-20, PREPARED BY DOANE ENGINEERING.
 - THE PROJECT COORDINATE SYSTEM IS REFERENCED TO THE BEARING SYSTEM OF THE REFERENCE MAP NOTED.
 - ELEVATIONS ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988.
 - THE PARCEL IS DEPICTED ON ASSESSORS MAP 67 AS LOT 4.
 - PARCEL AREA = 388, 259 SF = 8.91 AC.
 - THE PARCEL IS LOCATED WITHIN A LIMITED INDUSTRIAL (LI) ZONING DISTRICT.
 - THE PARCEL IS LOCATED WITHIN SPECIAL FLOOD HAZARD AREA ZONE A AND FLOOD ZONE X. REFERENCE: FEMA NATIONAL FLOOD INSURANCE PROGRAM FLOOD INSURANCE RATE MAP MIDDLESEX COUNTY, CONNECTICUT PANEL 333 OF 450, MAP NUMBER 09007C0333G, EFFECTIVE DATE: 8-28-08.
 - SOIL TYPES AND/OR SOIL TYPE BOUNDARIES DEPICTED HEREIN HAVE BEEN REPRODUCED FROM NATIONAL COOPERATIVE SOIL SURVEY DATA FOR THE STATE OF CONNECTICUT, U.S. DEPARTMENT OF AGRICULTURE, NATURAL RESOURCES CONSERVATION SERVICE.
 - UNDERGROUND UTILITIES, STRUCTURES AND OTHER FACILITIES DEPICTED HEREIN HAVE BEEN COMPILED FROM RECORD MAPS AND FIELD LOCATIONS OF ABOVE FACILITIES AND MARKOITS. ALL UNDERGROUND FACILITY LOCATIONS SHOWN SHOULD BE CONSIDERED APPROXIMATE ONLY AND ALL FACILITIES MAY NOT BE SHOWN.
 - THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL UNDERGROUND UTILITIES AND FOR THE MAINTENANCE AND PROTECTION THEREOF. CONTACT THE CONNECTICUT "CALL BEFORE YOU DIG" CLEARANCE CENTER (1-800-922-4455) AT LEAST TWO WORKING DAYS PRIOR TO THE START OF WORK TO ESTABLISH AND HAVE MARKED ON THE GROUND THE LOCATION OF ALL UNDERGROUND UTILITIES. NOTIFY THE ENGINEER IN THE EVENT THAT A UTILITY IS LOCATED DURING THE PROGRESS OF THE WORK THAT IS NOT INDICATED ON OR IS NOT IN ACCORDANCE WITH THE DRAWINGS.
- UTILITY COMPANY CONTACTS:
- | | |
|---|----------------|
| CABLE TELEVISION - COMCAST OF CONNECTICUT, INC. | (860) 505-3331 |
| COMMUNICATIONS - FRONTIER COMMUNICATIONS OF CONNECTICUT | (203) 238-5000 |
| COMMUNICATIONS - LIGHT TOWER FIBER NETWORKS, LLC | (203) 649-3904 |
| ELECTRIC - EVERSOURCE ENERGY | (860) 665-4733 |
| GAS - SOUTHERN CONNECTICUT GAS COMPANY | (203) 795-7767 |
| WATER - CONNECTICUT WATER COMPANY | (860) 664-8807 |
- IN GENERAL, EXISTING CONDITIONS AND FEATURES ARE DEPICTED IN SCREENED GRAPHICS AND TITLECASE LETTERING AND PROPOSED WORK IS DEPICTED IN BOLD GRAPHICS AND UPPERCASE LETTERING.
 - THE STANDARD SPECIFICATIONS ARE THE DIVISION II CONSTRUCTION DETAILS AND DIVISION III MATERIALS SECTION OF THE STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROADS, BRIDGES, FACILITIES AND INCIDENTAL CONSTRUCTION, FORM 818', 2020, LATEST REVISION, INCLUDING ALL SUPPLEMENTS THERETO.
 - PRIOR TO THE START OF WORK, THOROUGHLY REVIEW THE DRAWINGS, THE SITE OF THE WORK AND ALL EXISTING CONDITIONS AND FEATURES. NOTIFY THE ENGINEER OF DISCREPANCIES BETWEEN THE DRAWINGS AND EXISTING CONDITIONS AND FEATURES IN THE FIELD.
 - ADHERE TO THE REGULATIONS AND ORDINANCES OF THE TOWN OF ESSEX, ALL APPLICABLE STATE AND FEDERAL REGULATORY AUTHORITIES, AND THE PROVISIONS OF ALL APPROVALS AND OR PERMITS ISSUED FOR THE PROJECT.
 - PROVIDE EROSION AND SEDIMENT CONTROLS AS SHOWN ON THE DRAWINGS OR AS ORDERED BY THE ENGINEER. THE MINIMUM STANDARDS FOR ALL EROSION AND SEDIMENT CONTROLS SHALL BE THOSE OUTLINED IN THE 2002 CONNECTICUT GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL, LATEST REVISION. TEMPORARY EROSION AND SEDIMENT CONTROLS SHALL BE MAINTAINED UNTIL ALL DISTURBED AREAS HAVE BEEN STABILIZED.
 - MATERIAL AND EQUIPMENT STORAGE AREA LOCATIONS SHALL BE APPROVED BY THE ENGINEER.
 - VEHICLE AND EQUIPMENT FUELING AND MAINTENANCE OPERATIONS SHALL BE PERFORMED ONLY IN AREAS APPROVED BY THE ENGINEER.
 - IN THE EVENT OF A CONTAMINANT RELEASE, IMMEDIATELY NOTIFY THE CONNECTICUT DEPARTMENT OF ENERGY AND ENVIRONMENTAL PROTECTION EMERGENCY RESPONSE AND SPILL PREVENTION DIVISION (860-424-3338 OR 866-337-7745) AND THE TOWN OF ESSEX FIRE MARSHALS OFFICE (860-767-4340).
 - COORDINATE ALL BUILDING UTILITY SERVICE WORK WITH THE RESPECTIVE UTILITY COMPANIES.
 - WORK WITHIN THE RIGHT-OF-WAY OF BOKUM ROAD WILL REQUIRE AN ENCROACHMENT PERMIT FROM THE TOWN OF ESSEX DEPARTMENT OF PUBLIC WORKS.
 - BE RESPONSIBLE FOR THE MAINTENANCE AND PROTECTION OF TRAFFIC WITHIN AND ADJACENT TO WORK AREAS.
 - BE RESPONSIBLE FOR THE CONTROL OF DUST RESULTING FROM CONSTRUCTION OPERATIONS.
 - PROTECT ALL EXISTING CONDITIONS AND FEATURES WHERE NEW CONSTRUCTION IS NOT SHOWN ON THE DRAWINGS.
 - PROTECT STREET LINE MONUMENTS AND PRIVATE BOUNDARY MARKERS, RESET STREET LINE MONUMENTS AND PRIVATE BOUNDARY MARKERS DISTURBED BY CONSTRUCTION OPERATIONS.
 - PRIOR TO THE START OF TREE AND VEGETATION REMOVAL WORK, SCHEDULE A FIELD MEETING WITH THE ENGINEER TO REVIEW SPECIFIC TREES AND VEGETATION TO BE REMOVED AND TREES AND VEGETATION TO BE PROTECTED.
 - SAWCUT PAVEMENTS AT THE LINES SHOWN ON THE DRAWINGS. WHERE NEW BITUMINOUS CONCRETE PAVEMENT IS TO BE PLACED AGAINST EXISTING PAVEMENT, CLEAN THE FACE OF EXISTING PAVEMENT AND APPLY LIQUID BITUMEN. MATCH EXISTING ADJACENT PAVEMENT SURFACE ELEVATIONS WITH NEW PAVEMENT.
 - ADJUST MAN-HOLE FRAMES, HANDHOLES, AND VALVE BOXES TO MATCH FINISHED GROUND SURFACE AND PAVEMENTS ELEVATIONS.
 - PAVEMENT MARKINGS SHALL BE INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS.
 - SIGNS SHALL BE INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS. TEMPORARY AND PERMANENT SIGN IDENTIFICATION NUMBERS SHOWN ON THE DRAWINGS ARE IN ACCORDANCE WITH THE U.S. DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES", LATEST REVISION AND THE CONNECTICUT DEPARTMENT OF TRANSPORTATION SIGN CATALOG, LATEST REVISION.
 - THE SUBGRADE OF DISTURBED GROUND SURFACES NOT NOTED TO BE SURFACED OTHERWISE SHALL RECEIVE A 6" DEPTH OF TOPSOIL UPON WHICH TURF SHALL BE ESTABLISHED.

NO.	DATE	DESCRIPTION
REVISIONS		

LAND OF
GEORGE C. FIELD COMPANY, INC.
BOKUM ROAD
ESSEX, CONNECTICUT

PROJECT:	BOKUM ROAD BUSINESS PARK BOKUM ROAD ESSEX, CONNECTICUT		
DATE:	7-1-21	SHEET:	GENERAL NOTES, ABBREVIATIONS AND LEGEND
SCALE:	AS NOTED	SHEET NO.:	C0.2
DESIGNED:	MJO	FIELD BOOK:	
CHECKED:	LJM	PROJECT NO.:	20-50

Summer Hill
Civil Engineers & Land Surveyors, P.C.
60 Wall Street
P.O. Box 708
Madison, Connecticut 06443-0708
Telephone: (203) 245-0722

N/F
NEW ENGLAND BUILDERS FINISH, LLC
67-3

N/F
NEW ENGLAND BUILDERS FINISH, LLC
67-3

N/F
THOMAS J. MACWHINNEY
67-7

N/F
THOMAS J. MACWHINNEY
67-5

N/F
HELEN MACWHINNEY
67-6

N/F
SANDRA M. HUBER
67-4-1

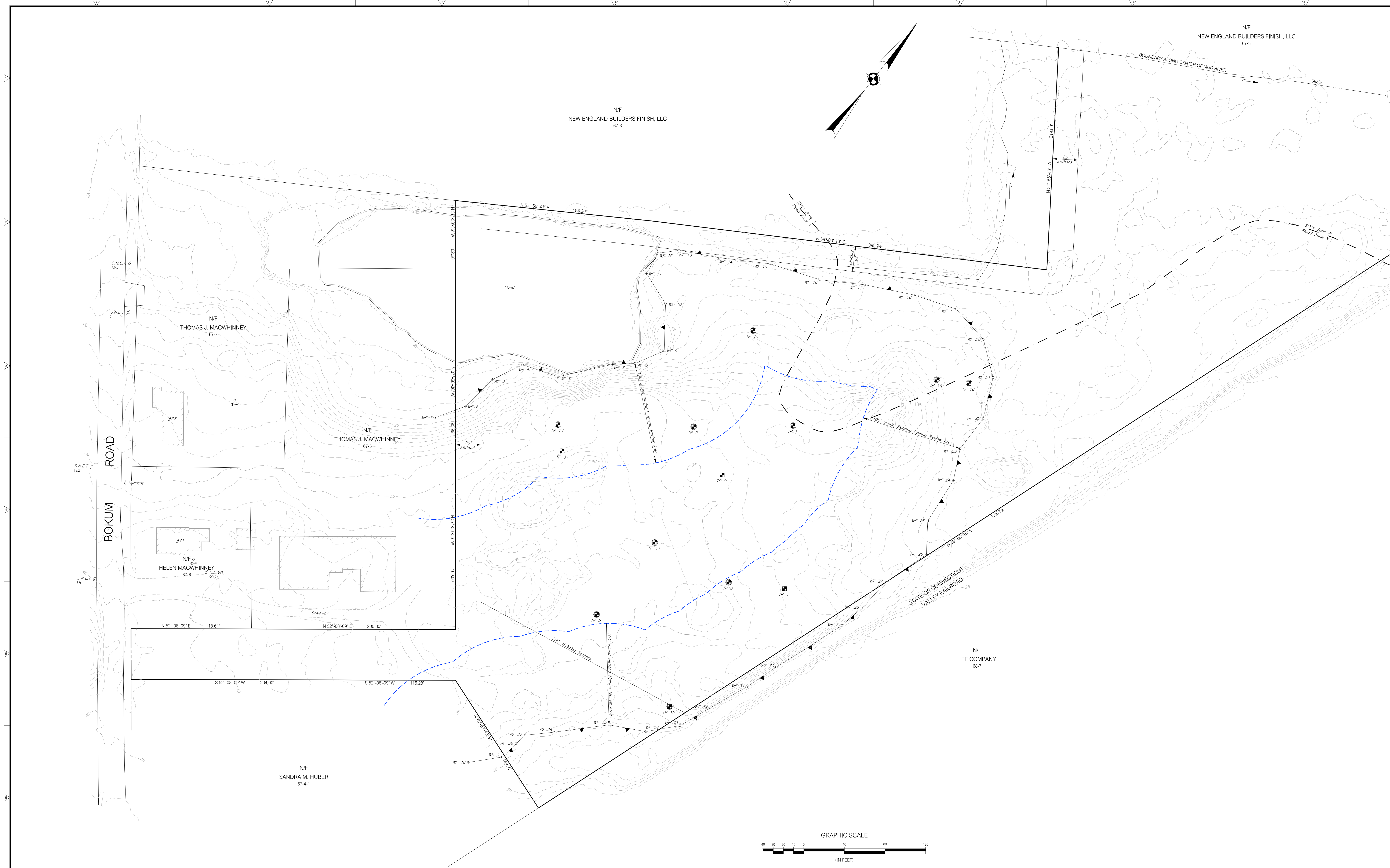
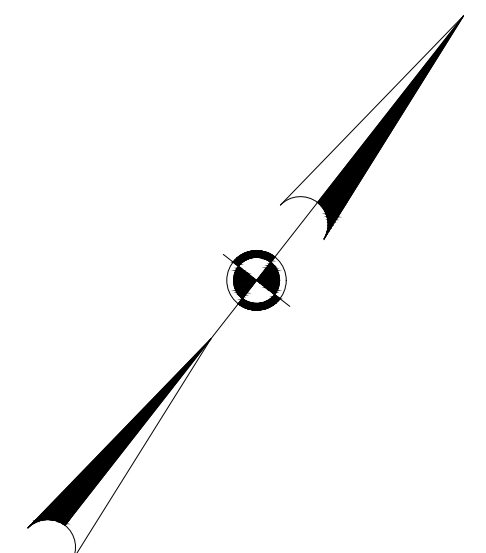
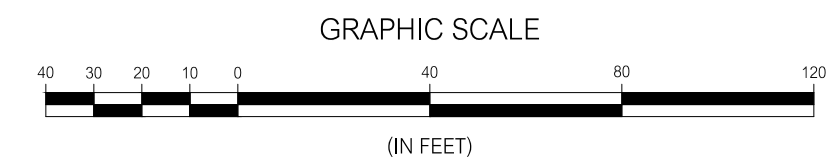
N/F
LEE COMPANY
68-7

LAND
OF
GEORGE C. FIELD COMPANY, INC.
BOKUM ROAD
ESSEX, CONNECTICUT

BOKUM ROAD BUSINESS PARK
BOKUM ROAD
ESSEX, CONNECTICUT

Summer Hill
Civil Engineers & Land Surveyors, P.C.
60 Wall Street
P.O. Box 708
Madison, Connecticut 06443-0708
Telephone: (203) 245-0722

DATE: 7-1-21	SHEET: 1	EXISTING CONDITIONS PLAN	C1.1
SCALE: 1"=40'	PROJECT NO.: 20-50		
DESIGNED: MJU	FIELD BOOK:		
CHECKED: LJM	PROJECT NO.: 20-50		



NO.	DATE	DESCRIPTION
REVISIONS		

REVISIONS	TITLE
	LAND OF GEORGE C. FIELD COMPANY, INC. BOKUM ROAD ESSEX, CONNECTICUT

PREPARED BY:	Summer Hill
PROJECT:	BOKUM ROAD BUSINESS PARK

DATE:	7-1-21	SHEET:	1
SCALE:	1"=40'	PROJECT NO.:	20-50
DESIGNED:	MJU	FIELD BOOK:	
CHECKED:	LJM	PROJECT NO.:	20-50

NOTES:

1. ALL STORM SEWERS SHALL BE 15" DIAMETER CORRUGATED HIGH DENSITY POLYETHYLENE SMOOTH INTERIOR PIPE MEETING THE REQUIREMENTS OF AASHTO M 294, TYPE S WITH BELL AND SPIGOT JOINTS.

HB GSF STRAW BALE AND GEOSYNTHETIC SILT FENCE SEDIMENT BARRIER, TYP. SEE DETAIL SHEET C3.6

SOIL REINFORCED SEGMENTAL RETAINING WALL SEE DETAIL SHEET C3.5

N/F NEW ENGLAND BUILDERS FINISH, LLC 67-3

TYPE 'C' CATCH BASIN
T.F. 32.50
INV. 29.00

R-B END ANCHOR TYPE I

STORM MANHOLE
T.F. 33.90
INV. 27.94
INV. 6' 28.69

TYPE 'C' CATCH BASIN
T.F. 34.70
INV. IN 25.64
INV. OUT 21.14

15" METAL CULVERT END
INV. 21.96

N/F THOMAS J. MACWHINNEY 67-7

TYPE 'C' CATCH BASIN
T.F. 34.80
INV. 30.26

N/F THOMAS J. MACWHINNEY 67-5

OUTLET CONTROL STRUCTURE 2
SEE DETAIL SHEET C3.3

15" METAL CULVERT END
INV. 21.00

15" METAL CULVERT END
INV. 21.00

BOKUM ROAD

N/F HELEN MACWHINNEY 67-6

BUILDING 1
F.F. EL. 29.90

BUILDING 2
F.F. EL. 29.30

STATE OF CONNECTICUT
VALLEY RAILROAD

TYPE 'C' CATCH BASIN
T.F. 34.60
INV. 27.02
INV. 6' 27.77

N/F LEE COMPANY 68-7

STORM MANHOLE
T.F. 33.90
INV. IN 29.10
INV. 6' 29.85
INV. OUT 21.50

STOP SIGN R1 (31-0552)

N/F SANDRA M. HUBER 67-4-1

TYPE 'C' CATCH BASIN
T.F. 34.17
INV. 29.10

15" METAL CULVERT END
INV. 29.00

OUTLET CONTROL STRUCTURE 1
SEE DETAIL SHEET C3.3

TYPE 'C' CATCH BASIN
T.F. 34.17
INV. 29.22

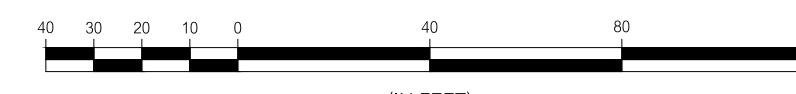
R-B END ANCHOR TYPE I

15" METAL CULVERT END
INV. 29.93

TYPE 'C' CATCH BASIN
T.F. 32.60
INV. 28.00

R-B END ANCHOR TYPE I

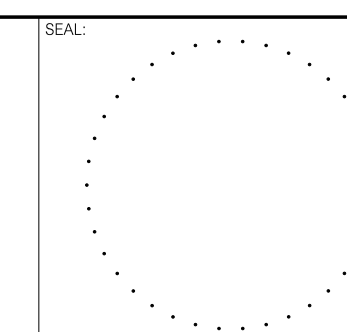
GRAPHIC SCALE



R-B END ANCHOR TYPE I

CE TEMPORARY CONSTRUCTION ENTRANCE
SEE DETAIL SHEET C3.6

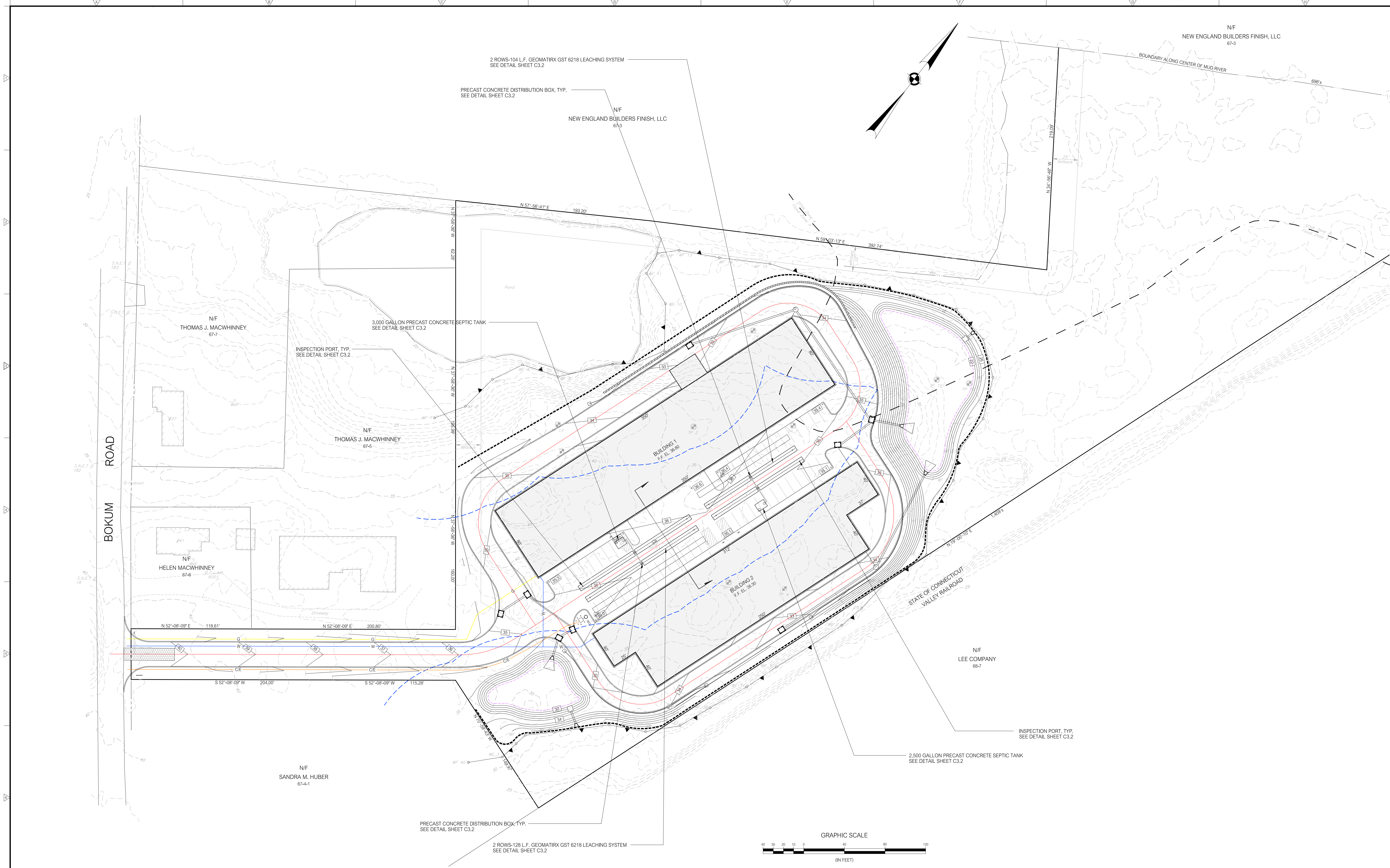
LAND OF
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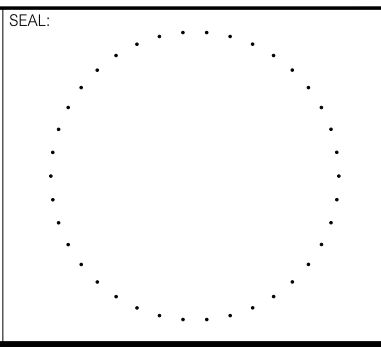
PROJECT: BOKUM ROAD BUSINESS PARK BOKUM ROAD ESSEX, CONNECTICUT		SHEET NO.:
DATE: 7-1-21	SHEET: GENERAL PLAN	SHEET NO. C2.1
SCALE: 1"=40'		
DESIGNED: MJJO		
CHECKED: LJM		
FIELD BOOK:	PROJECT NO.: 20-60	

NO.	DATE	DESCRIPTION
REVISIONS		



NO.	DATE	DESCRIPTION
REVISIONS		

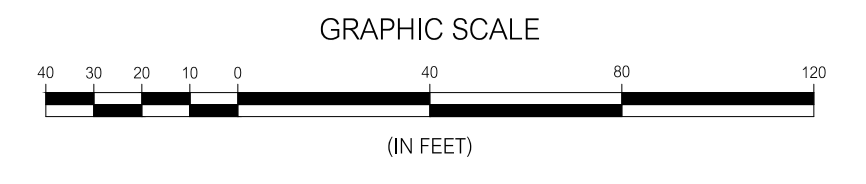
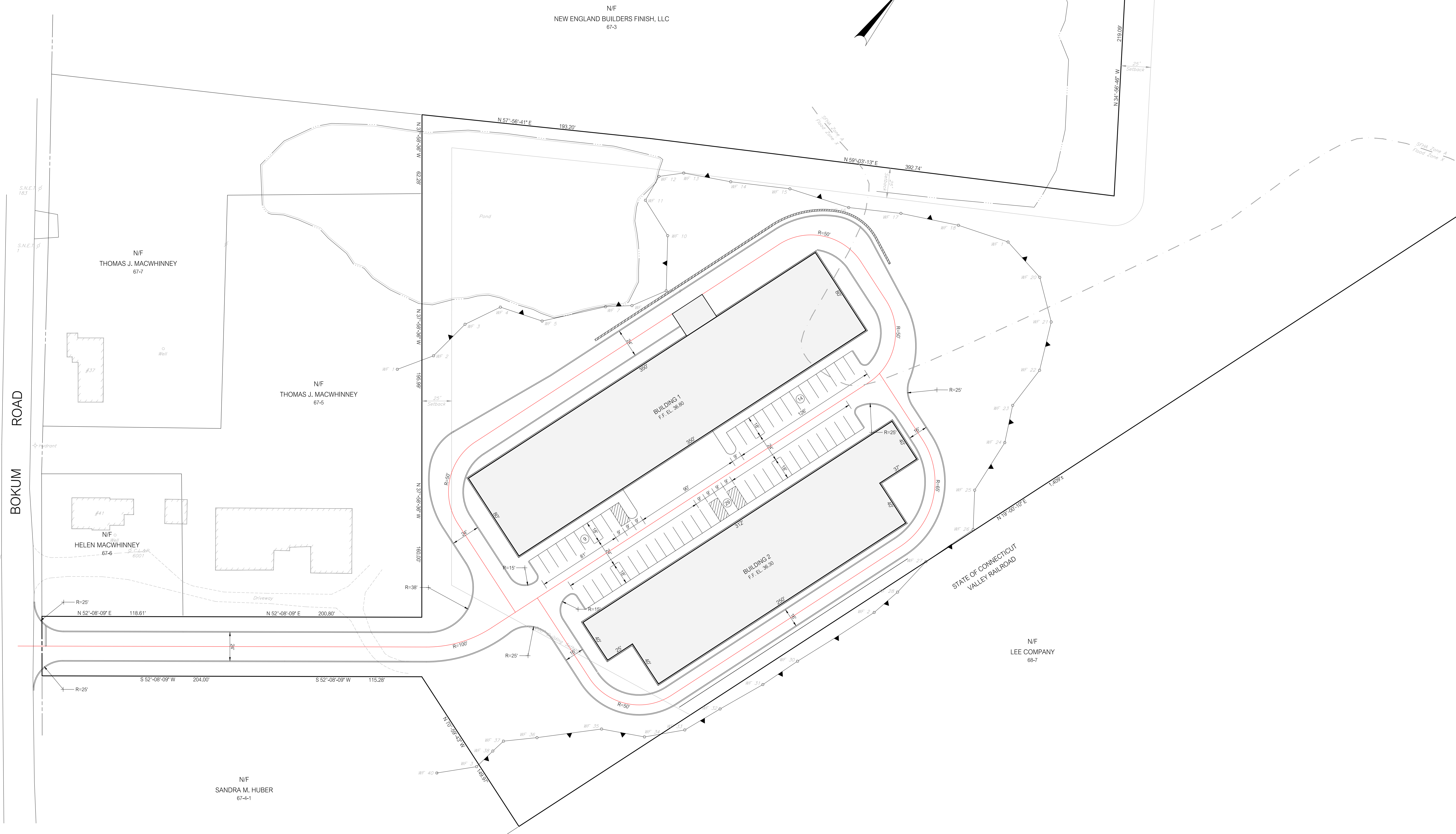
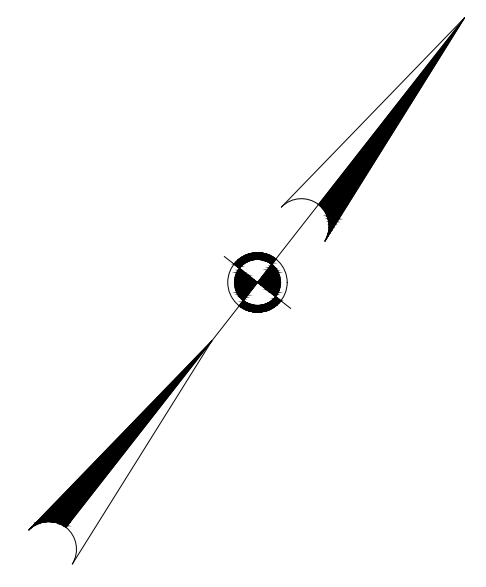
LAND OF
 GEORGE C. FIELD COMPANY, INC.
 BOKUM ROAD
 ESSEX, CONNECTICUT



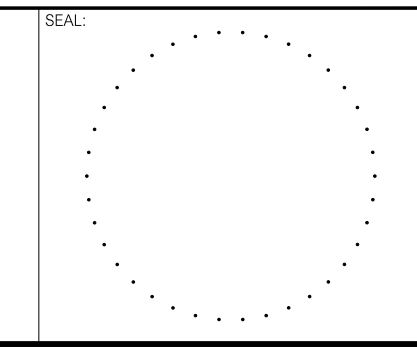
PREPARED BY:
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 P.O. Box 708
 Madison, Connecticut 06443-0708
 Telephone: (203) 245-0722

PROJECT: BOKUM ROAD BUSINESS PARK BOKUM ROAD ESSEX, CONNECTICUT		SHEET NO.:
DATE: 7-1-21 SCALE: 1"=40' DESIGNED: MJU CHECKED: LJM	SHEET: SUBSURFACE SEWAGE DISPOSAL SYSTEM PLAN	C2.2
PROJECT NO.: 20-50		

- NOTES:**
1. ALL DIMENSIONS ARE TO EDGE OF PAVEMENT OR FACE OF CURBING.
 2. PAVEMENT OR CURBING CURVE RADI NOT DIMENSIONED OR SHOWN IN THE DRAWING DETAILS ARE FIVE (5) FEET.
 3. PARKING BAY STALL NUMBER TOTALS ARE IDENTIFIED THUS: ⑩



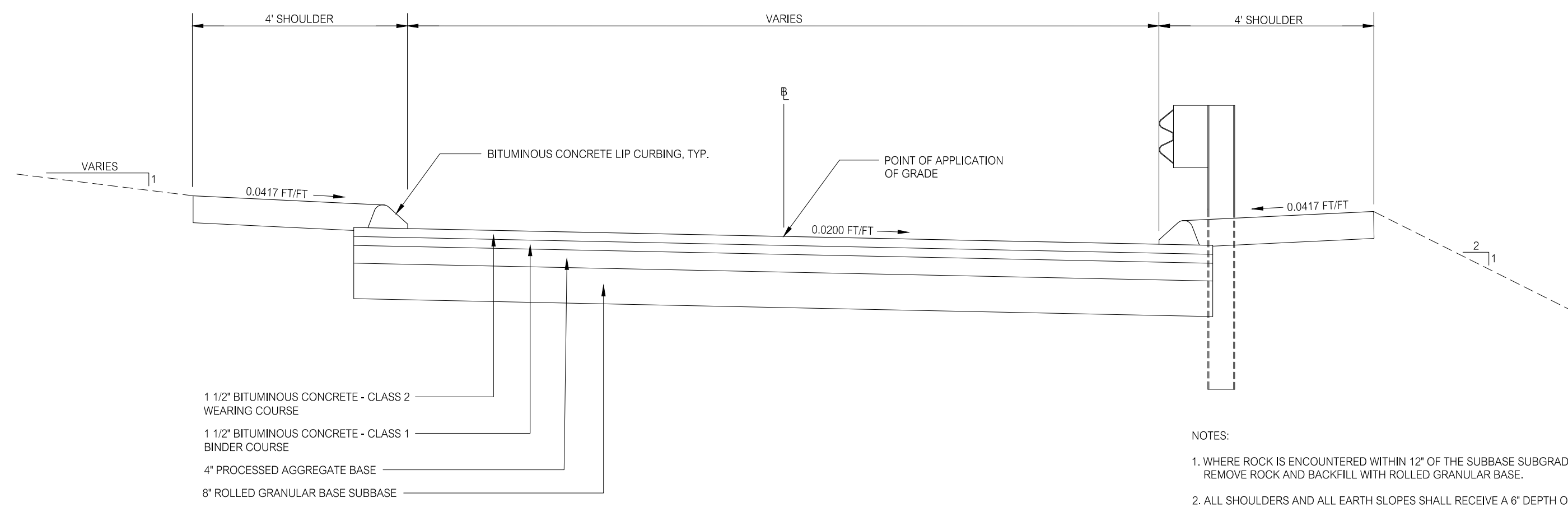
LAND OF
GEORGE C. FIELD COMPANY, INC.
BOKUM ROAD
ESSEX, CONNECTICUT



PREPARED BY:
Summer Hill
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Telephone: (203) 245-0722

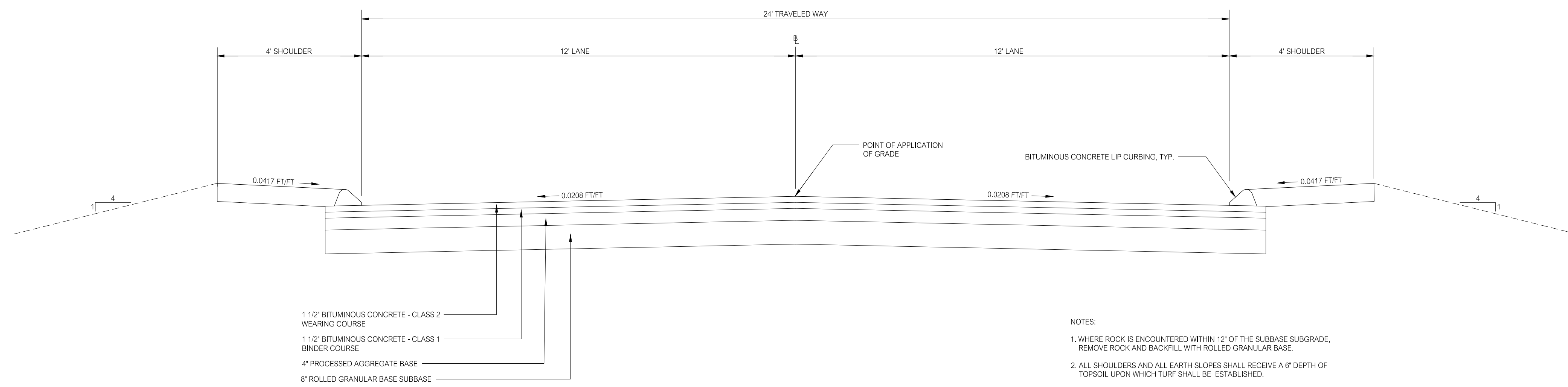
PROJECT: BOKUM ROAD BUSINESS PARK BOKUM ROAD ESSEX, CONNECTICUT		SHEET NO.:
DATE: 7-1-21	SHEET: 1	SHEET NO. C2.3
SCALE: 1"=40'	TITLE: SITE LAYOUT PLAN	
DESIGNED: MJO	PROJECT NO.: 20-50	
CHECKED: LJM	FIELD BOOK:	

NO.	DATE	DESCRIPTION
REVISIONS		



TYPICAL DRIVEWAY CROSS SECTION
NOT TO SCALE

NOTES:
1. WHERE ROCK IS ENCOUNTERED WITHIN 12" OF THE SUBBASE SUBGRADE, REMOVE ROCK AND BACKFILL WITH ROLLED GRANULAR BASE.
2. ALL SHOULDERS AND ALL EARTH SLOPES SHALL RECEIVE A 6" DEPTH OF TOPSOIL, UPON WHICH TURF SHALL BE ESTABLISHED.

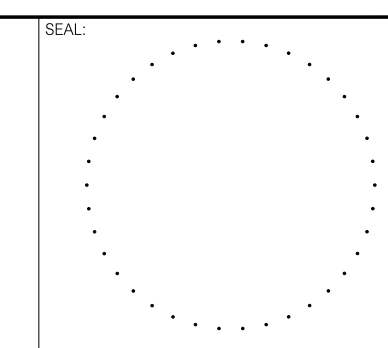


TYPICAL ACCESS ROADWAY CROSS SECTION
NOT TO SCALE

NOTES:
1. WHERE ROCK IS ENCOUNTERED WITHIN 12" OF THE SUBBASE SUBGRADE, REMOVE ROCK AND BACKFILL WITH ROLLED GRANULAR BASE.
2. ALL SHOULDERS AND ALL EARTH SLOPES SHALL RECEIVE A 6" DEPTH OF TOPSOIL, UPON WHICH TURF SHALL BE ESTABLISHED.

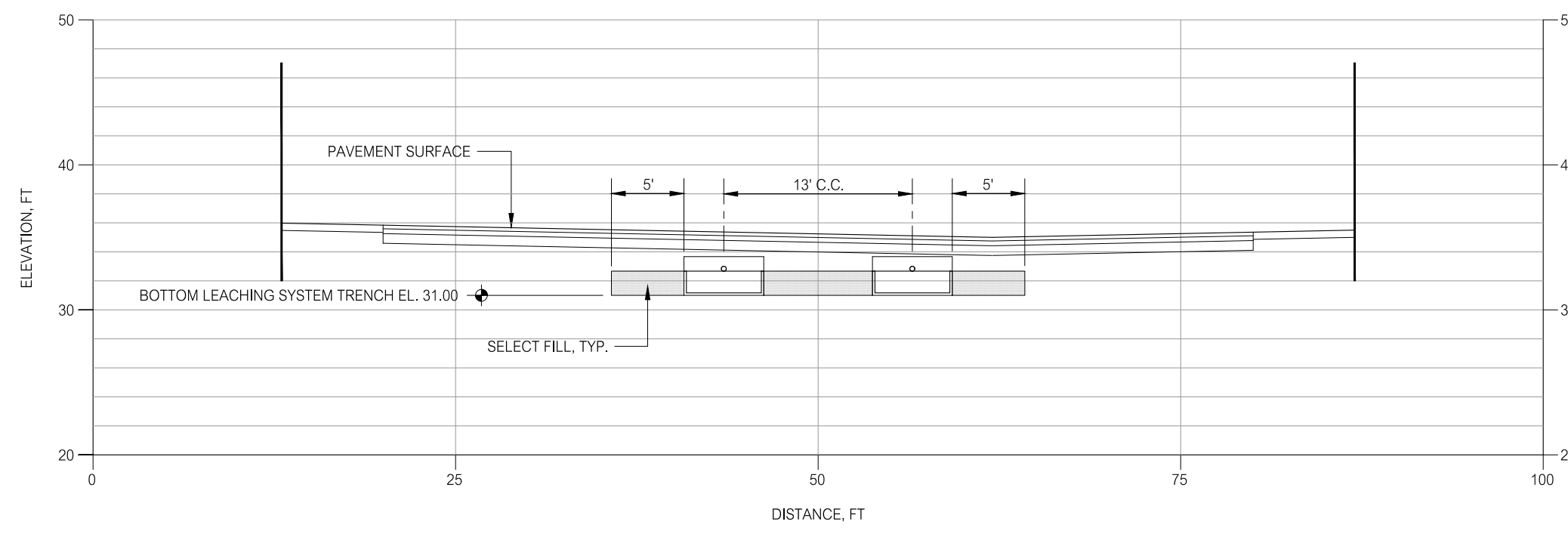
NO.	DATE	DESCRIPTION
REVISIONS		

LAND OF
GEORGE C. FIELD COMPANY, INC.
BOKUM ROAD
ESSEX, CONNECTICUT

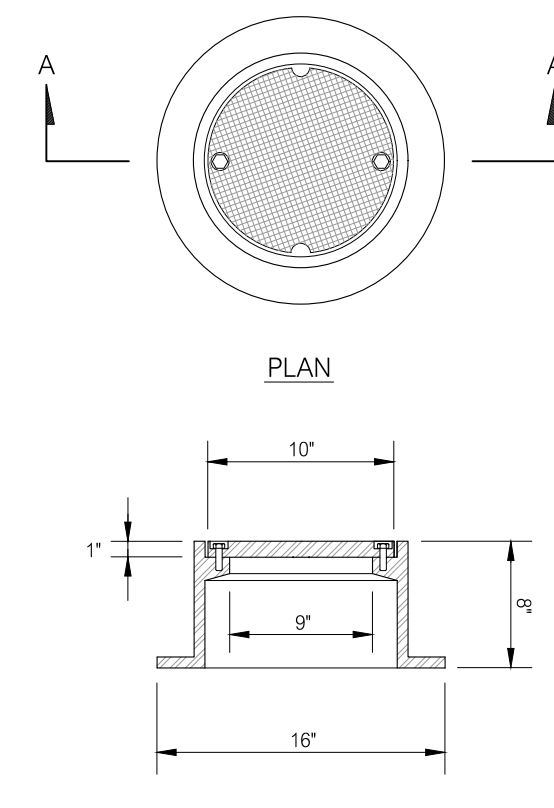


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Madison, Connecticut 06443-0708
Telephone: (203) 245-0722

PROJECT: BOKUM ROAD BUSINESS PARK BOKUM ROAD ESSEX, CONNECTICUT		SHEET NO.: DETAILS	SHEET NO.: C3.1
DATE: 7-1-21	SCALE: AS NOTED	DESIGNED: MJO	CHECKED: LJM
PROJECT NO.: 20-50			

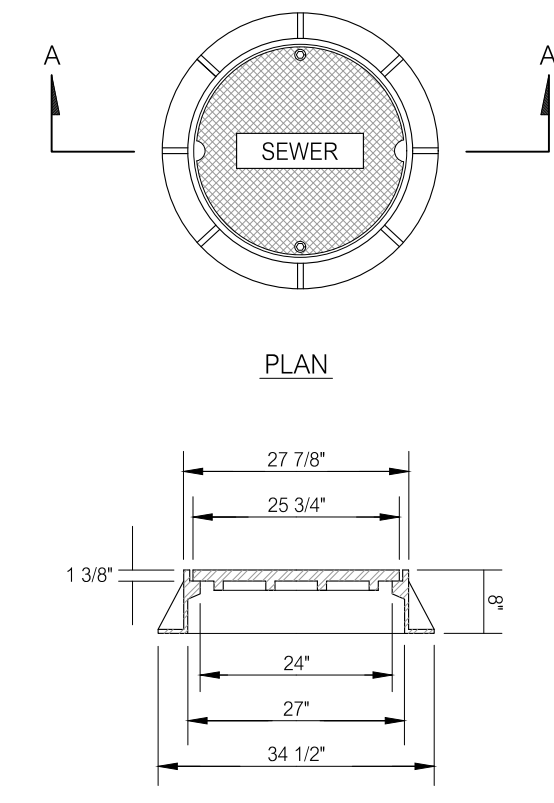


TYPICAL LEACHING FIELD SECTION
SCALE: 1"=10'



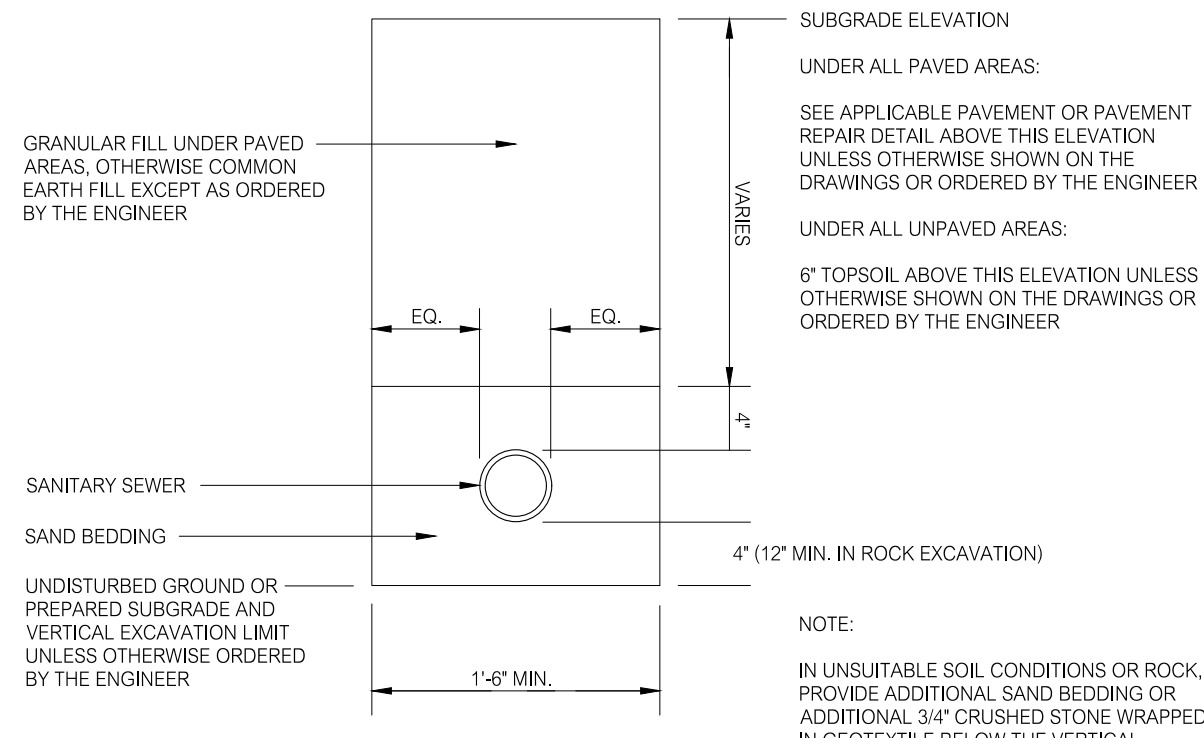
ACCESS FRAME AND COVER
NOT TO SCALE

NOTE:
HEAVY DUTY, BOLTED COVER ACCESS FRAME AND COVER-
PATTERN NUMBER 4155, CAMPBELL FOUNDRY COMPANY, NORTH HAVEN,
CONNECTICUT OR APPROVED EQUAL.

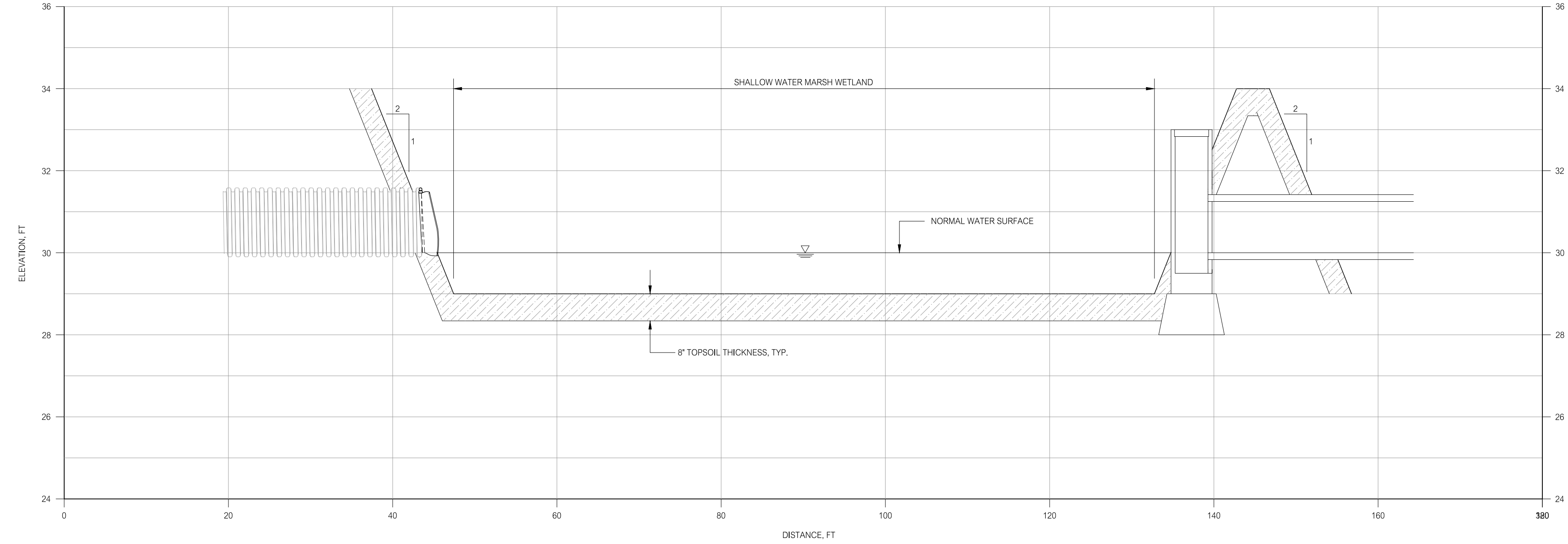


MANHOLE FRAME AND COVER
NOT TO SCALE

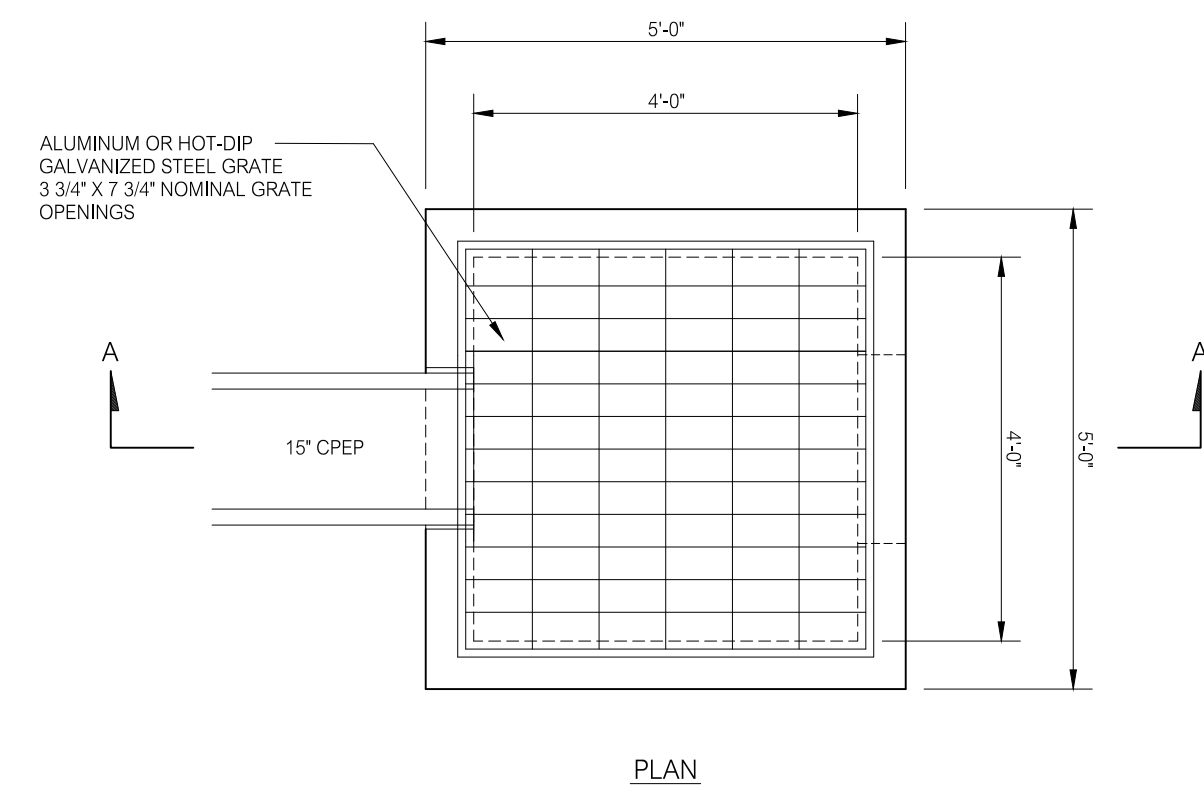
NOTES:
1. HEAVY DUTY, WATERTIGHT, BOLTED COVER MANHOLE FRAME AND COVER-
PATTERN NUMBER 1009-4882, CAMPBELL FOUNDRY COMPANY, HARRISON,
NEW JERSEY OR APPROVED EQUAL.
2. THE DESIGNATION 'SEWER' SHALL BE CAST IN THE MANHOLE COVER.



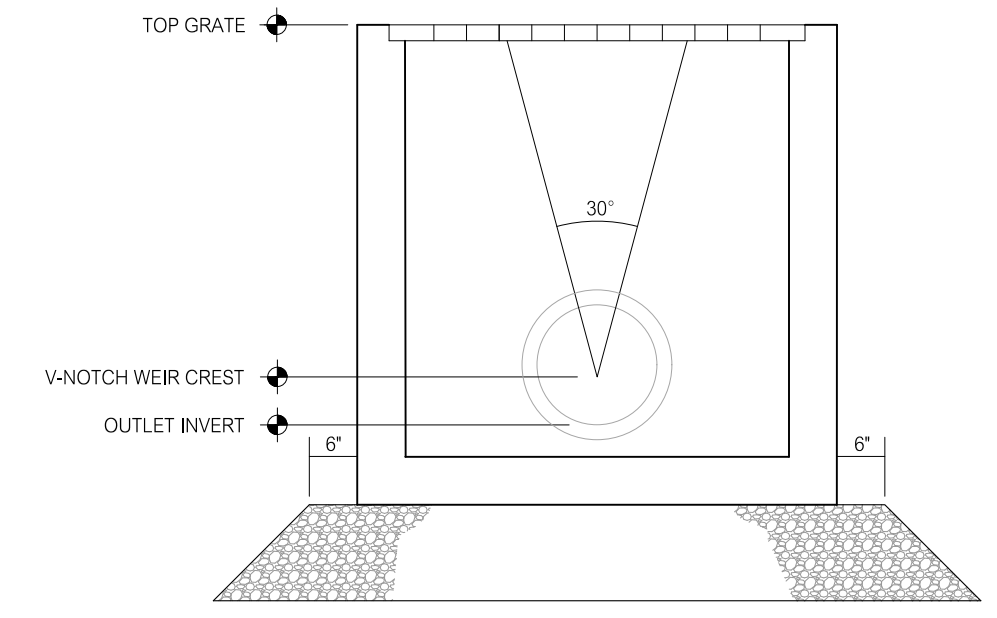
SANITARY SEWER TRENCH
NOT TO SCALE



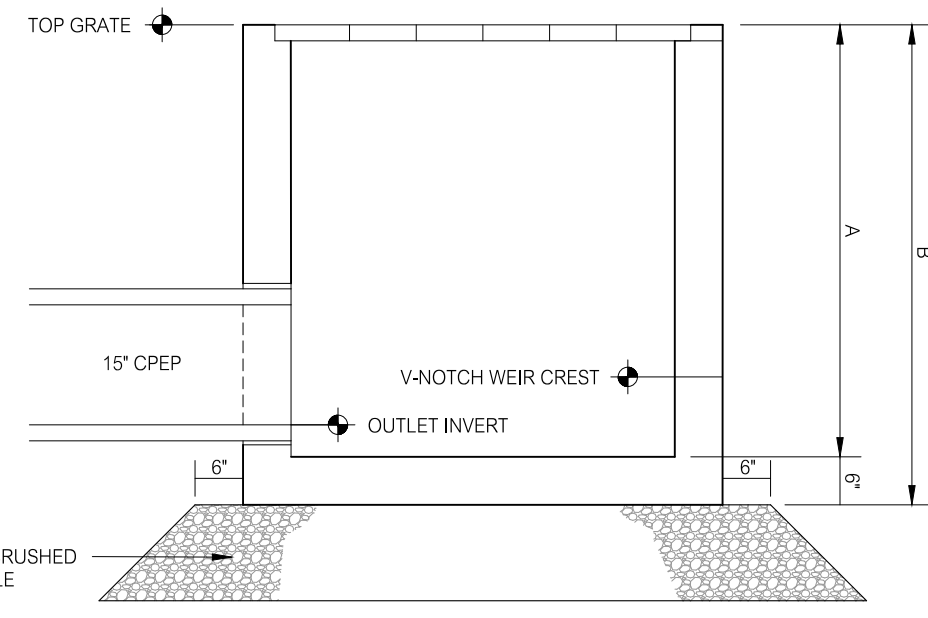
TYPICAL STORMWATER WETLAND CROSS SECTION
SCALE: 1"=10' H
1"= 2' V



PLAN



FRONT ELEVATION



SECTION A-A

PRECAST CONCRETE OUTLET CONTROL STRUCTURE
NOT TO SCALE

STRUCTURE	OUTLET CONTROL STRUCTURE ELEVATIONS AND DIMENSIONS				
	V-NOTCH WEIR CREST	OUTLET INVERT	TOP GRATE	A	B
OCS 1	30.50	30.00	33.00	3.39	3.93
OCS 2	22.50	22.00	24.00	2.33	2.83

STORMWATER WETLAND CONSTRUCTION NOTES:

- CONSTRUCTION OF THE STORMWATER WETLANDS INCLUDING THE INSTALLATION OF ALL PLANT MATERIAL SHALL BE OVERSEEN BY A PROFESSIONAL WETLAND SCIENTIST.
- PERMANENT SEEDING SHALL BE ACCOMPLISHED BETWEEN APRIL 15 AND JUNE 15 OR AUGUST 15 AND SEPTEMBER 15 UNLESS A TEMPORARY WATERING PLAN IS SUBMITTED BY THE CONTRACTOR AND APPROVED BY THE WETLAND SCIENTIST.
- SHOULD PERMANENT SEEDING NOT BE ACCOMPLISHED WITHIN THE DATES SPECIFIED ABOVE, ALL DISTURBED AREAS SHALL BE SEED WITH THE TEMPORARY SEED MIXTURE SPECIFIED ON THIS SHEET AND TEMPORARY STRAW MULCH SHALL BE INSTALLED AT A RATE OF 90 POUNDS PER 1,000 SQUARE FEET OVER ALL TEMPORARY SEEDING AREAS.
- PERMANENT SEED MIXTURE SHALL BE AS SPECIFIED ON THIS SHEET.
- THE INTERIOR SLOPES OF THE STORMWATER WETLANDS SHALL BE OVERSEED WITH A SEED MIXTURE CONTAINING SPECIES NATIVE TO NEW ENGLAND SUCH AS THE NEW ENGLAND CONSERVATION WILDLIFE SEED MIXTURE PROVIDED BY NEW ENGLAND WETLAND PLANTS, INC., AMHERST, MASSACHUSETTS, OR A SEED MIXTURE APPROVED BY THE WETLAND SCIENTIST.

PERMANENT SEED MIXTURE

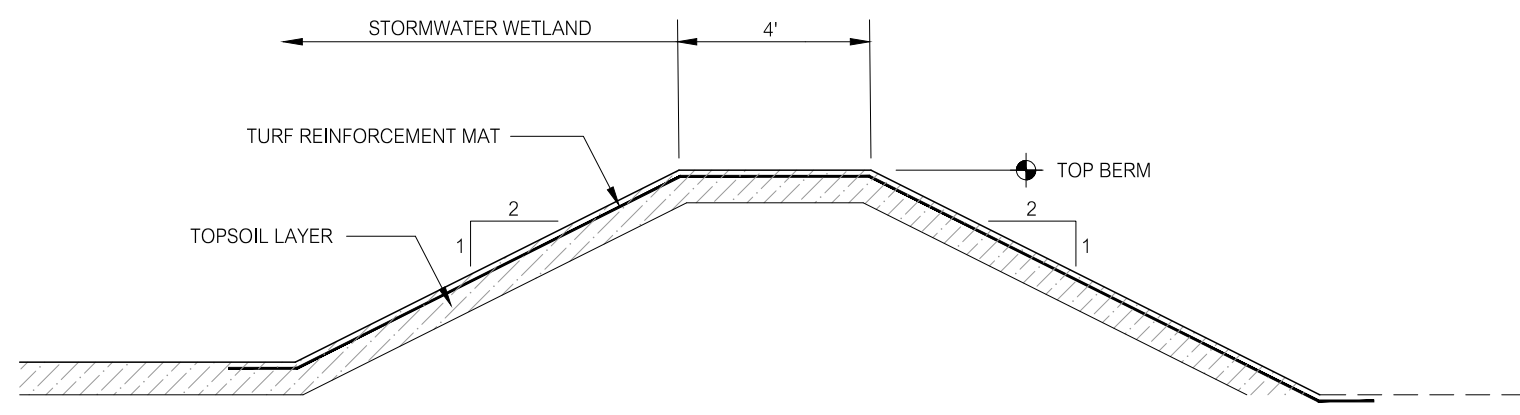
	POUNDS PER ACRE	POUNDS PER 1,000 SQUARE FEET
CREEPING RED FESCUE	20	0.45
REDTOP	2	0.05
TALL FESCUE OR SMOOTH BROMEGRASS	40	0.45
TOTAL	42	0.95

TEMPORARY SEED MIXTURE

	POUNDS PER ACRE	POUNDS PER 1,000 SQUARE FEET
ANNUAL RYEGRASS OR	40	1.00
PERENNIAL RYEGRASS OR	40	1.00
WINTER RYE	120	3.00

WETLAND PLANT LIST STORMWATER WETLAND 1			
SYMBOL	QUANTITY	COMMON NAME	BOTANICAL NAME
SA	250	AMERICAN BURREED	Sparganium americanum
SL	100	ARROWHEAD	Sagittaria latifolia
PC	250	PICKERELWEED	Pontederia cordata
SV	50	SOFT STEM BULRUSH	Scirpus validus

WETLAND PLANT LIST STORMWATER WETLAND 2			
SYMBOL	QUANTITY	COMMON NAME	BOTANICAL NAME
SA	550	AMERICAN BURREED	Sparganium americanum
SL	250	ARROWHEAD	Sagittaria latifolia
PC	550	PICKERELWEED	Pontederia cordata
SV	150	SOFT STEM BULRUSH	Scirpus validus



SECTION
STORMWATER WETLAND BERM
NOT TO SCALE

NO.	DATE	DESCRIPTION
REVISIONS		

LAND
OF
GEORGE C. FIELD COMPANY, INC.
BOKUM ROAD
ESSEX, CONNECTICUT

SEAL:

PREPARED BY:
Summer Hill
Civil Engineers & Land Surveyors, P.C.
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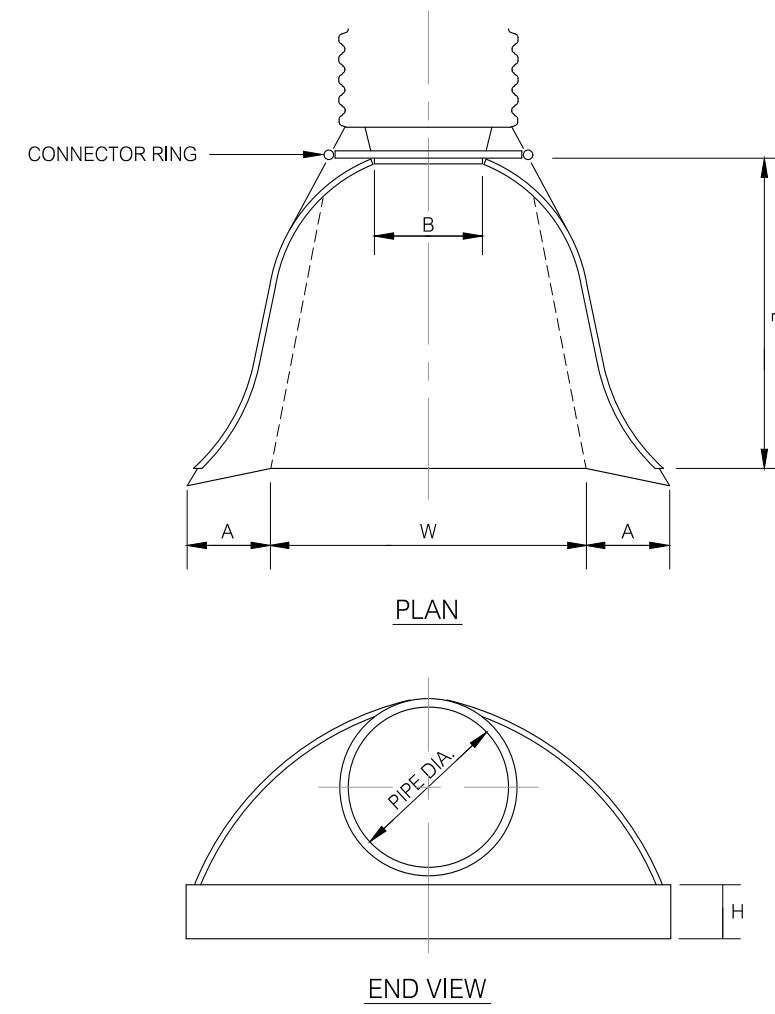
PROJECT: **BOKUM ROAD BUSINESS PARK**
BOKUM ROAD
ESSEX, CONNECTICUT

DATE: 7-1-21
SCALE: AS NOTED
DESIGNED: MJO
CHECKED: LJM

SHEET: **DETAILS**

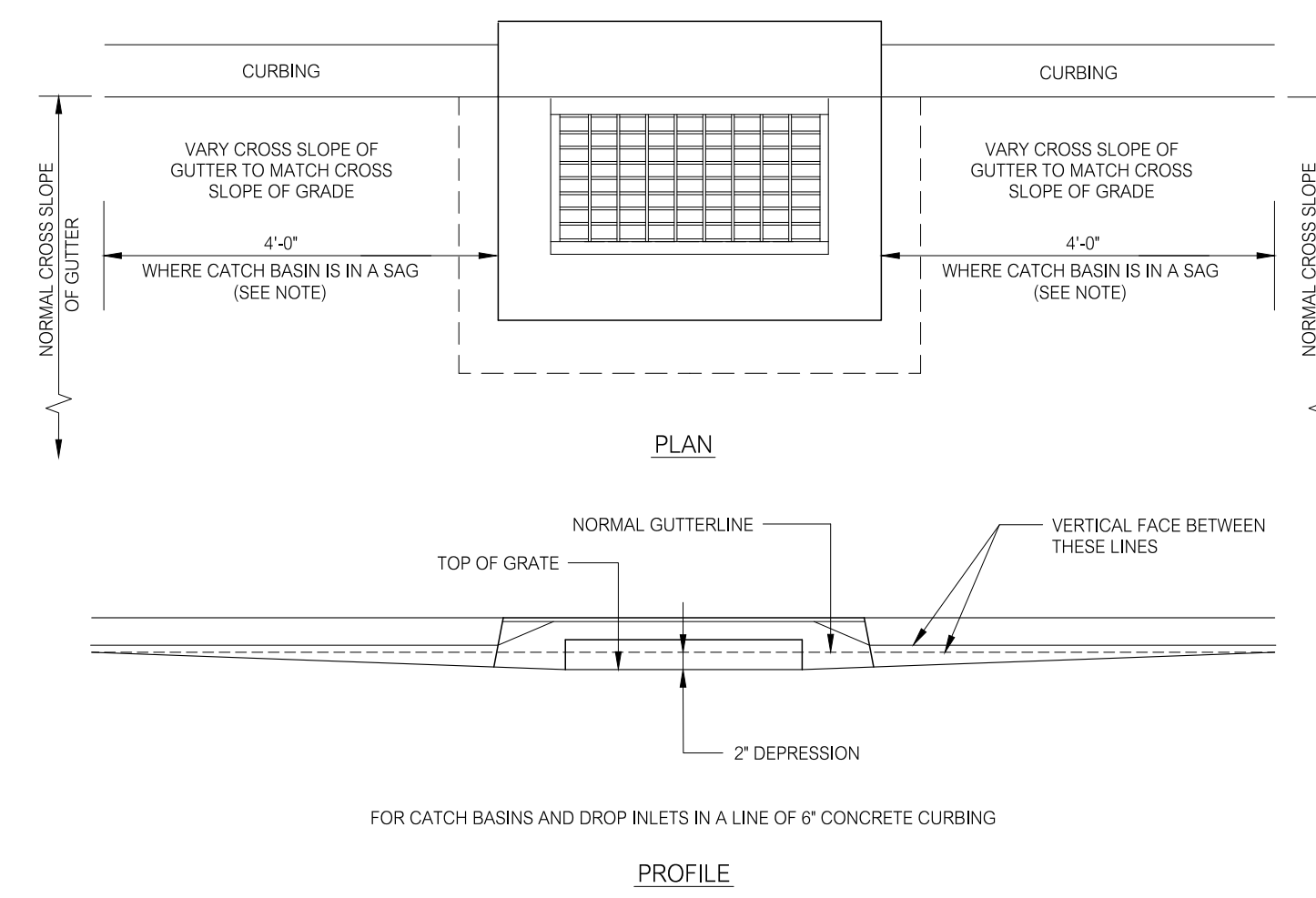
SHEET NO.: **C3.3**

PROJECT NO.: 20-50



DIMENSIONS FOR METAL CULVERT END						
PIPE DIA.	A MAX	B MAX	H ± 1"	L ± 1 1/2"	W ± 2"	THICKNESS (INCHES)
12	6	6	6	21	24	.064
15	7	8	6	26	30	.064
18	8	10	6	31	36	.064
21	9	12	6	36	42	.064
24	10	13	6	41	48	.064
30	12	16	8	51	60	.079
36	14	19	9	60	72	.079

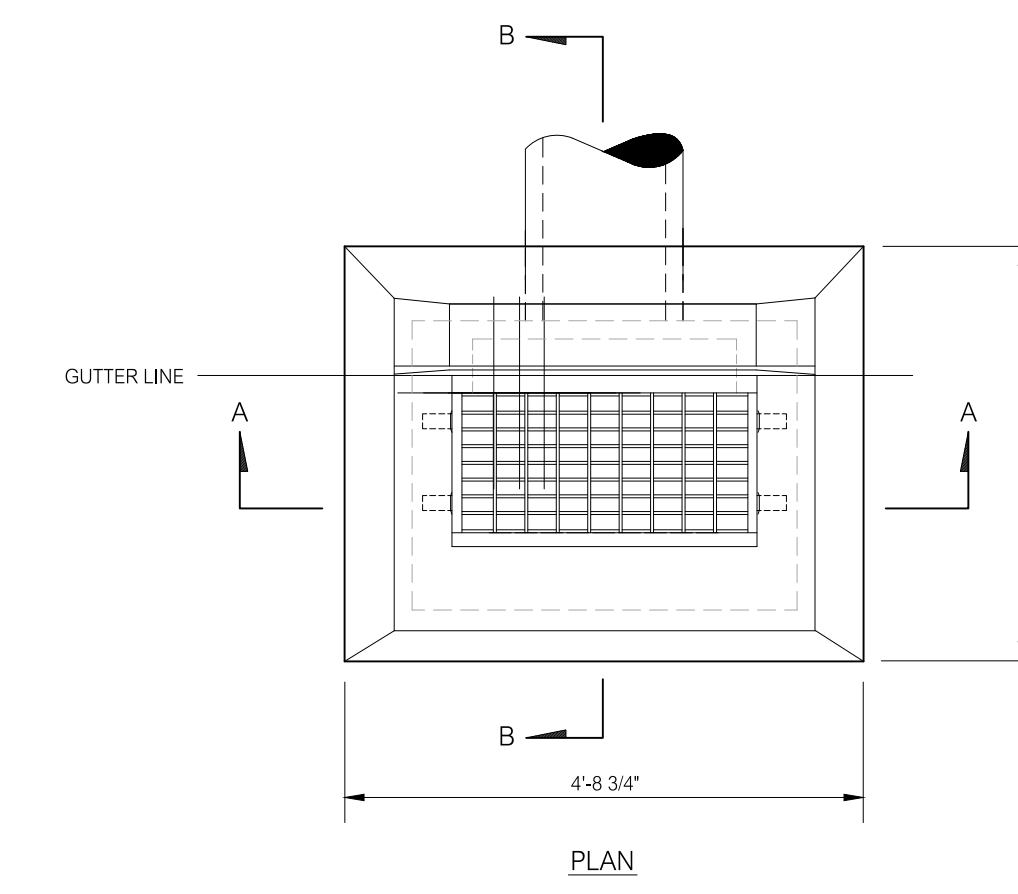
METAL CULVERT END
NOT TO SCALE



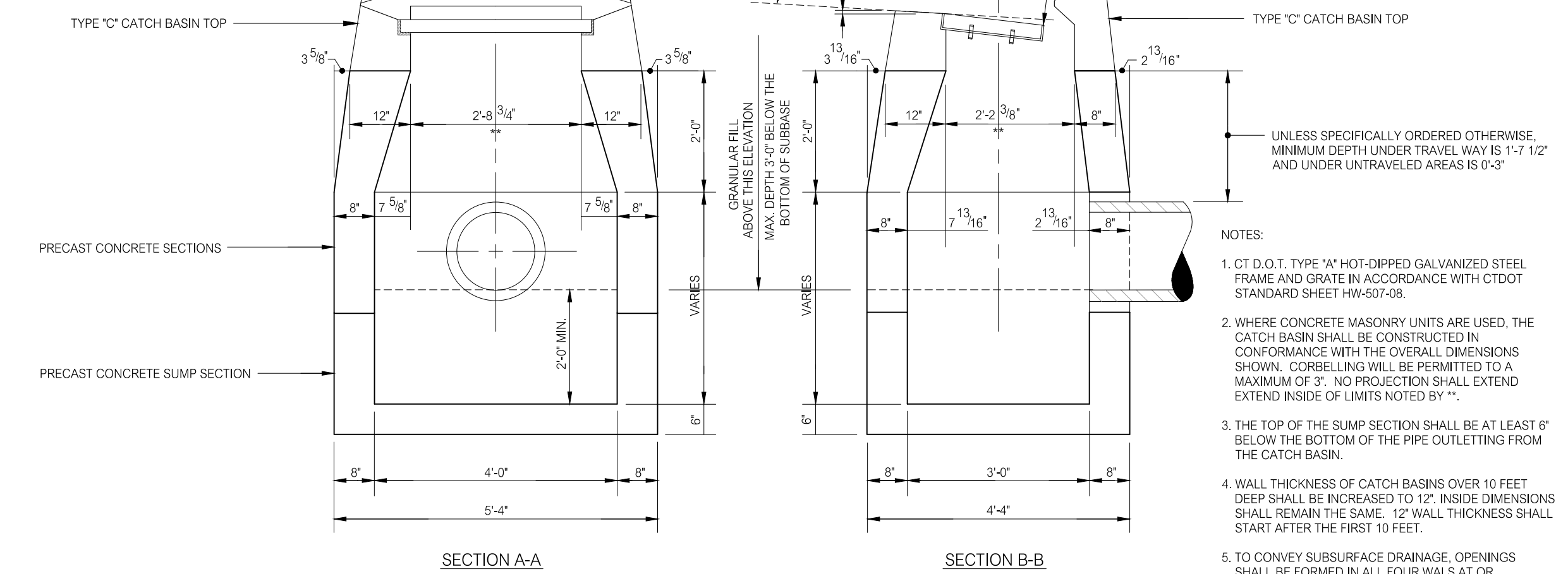
FOR CATCH BASINS AND DROP INLETS IN A LINE OF 6" CONCRETE CURBING

DETAILS OF DEPRESSED GUTTER STRIP
NOT TO SCALE

NOTE:
6'-0" ON UPGRADE SIDE OF CONTINUOUS GRADE, 1'-0" ON DOWNGRADE SIDE OF CONTINUOUS GRADE OR AS DIRECTED.



PLAN

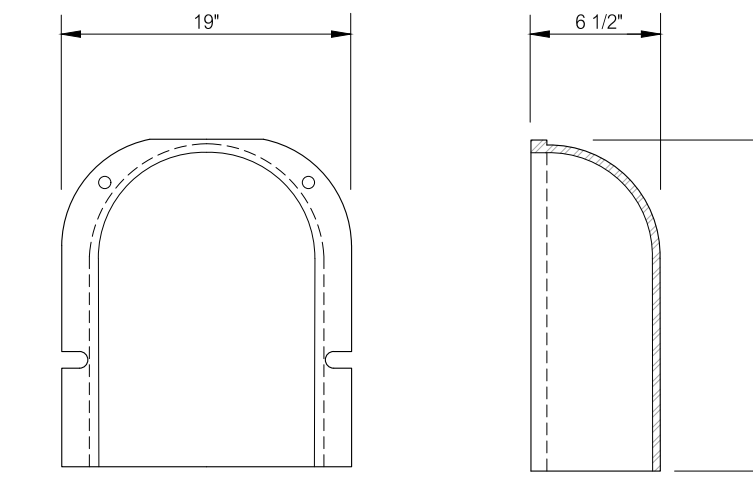


SECTION A-A

SECTION B-B

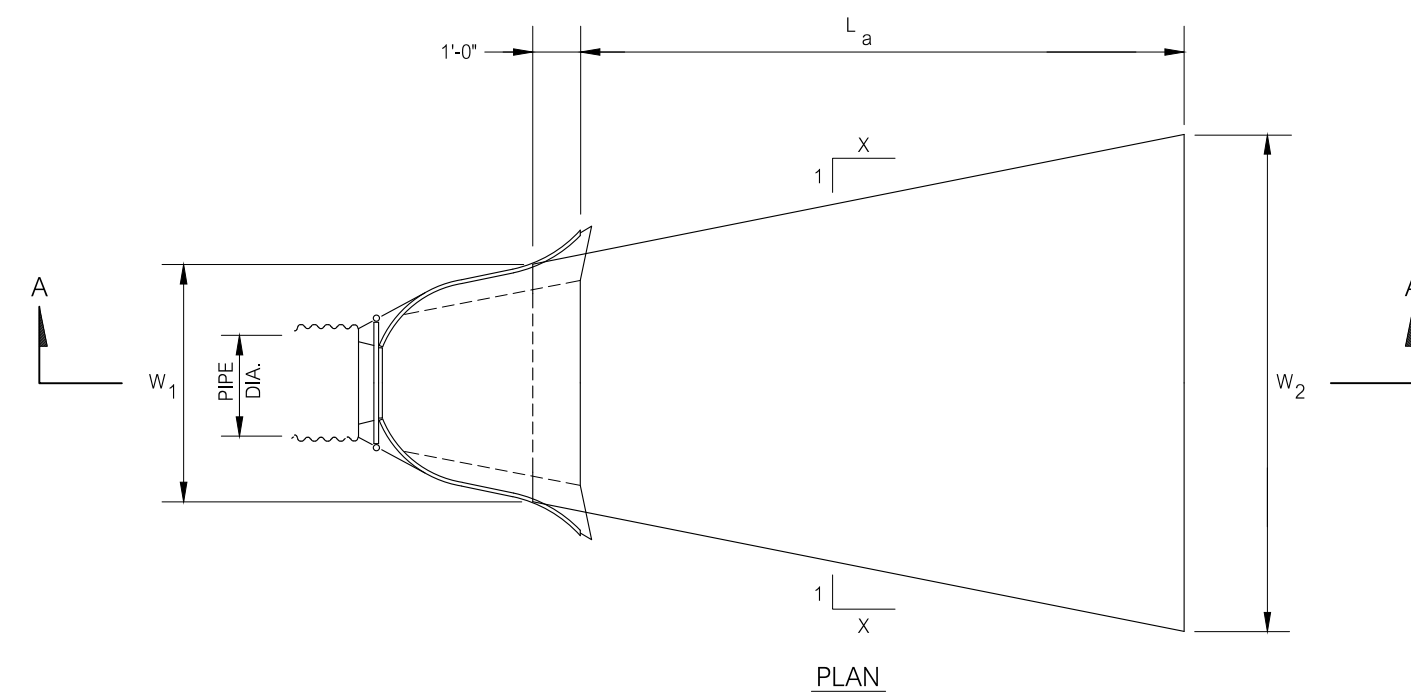
TYPE 'C' CATCH BASIN
NOT TO SCALE

- NOTES:
1. C.T. D.O.T. TYPE 'A' HOT-DIPPED GALVANIZED STEEL FRAME AND GRATE IN ACCORDANCE WITH CTDOT STANDARD SHEET HW-507-08.
 2. WHERE CONCRETE MASONRY UNITS ARE USED, THE CATCH BASIN SHALL BE CONSTRUCTED IN CONFORMANCE WITH THE OVERALL DIMENSIONS SHOWN. CORBELLING WILL BE PERMITTED TO A MAXIMUM OF 3". NO PROJECTION SHALL EXTEND BEYOND INSIDE OF LIMITS NOTED BY "X".
 3. THE TOP OF THE SUMP SECTION SHALL BE AT LEAST 6" BELOW THE BOTTOM OF THE PIPE OUTLETTING FROM THE CATCH BASIN.
 4. WALL THICKNESS OF CATCH BASINS OVER 10 FEET DEEP SHALL BE INCREASED TO 12". INSIDE DIMENSIONS SHALL REMAIN THE SAME. 12" WALL THICKNESS SHALL START AFTER THE FIRST 10 FEET.
 5. TO CONVEY SUBSURFACE DRAINAGE, OPENINGS SHALL BE FORMED IN ALL FOUR WALLS AT OR IMMEDIATELY ABOVE THE BOTTOM OF THE PERVIOUS BACKFILL.

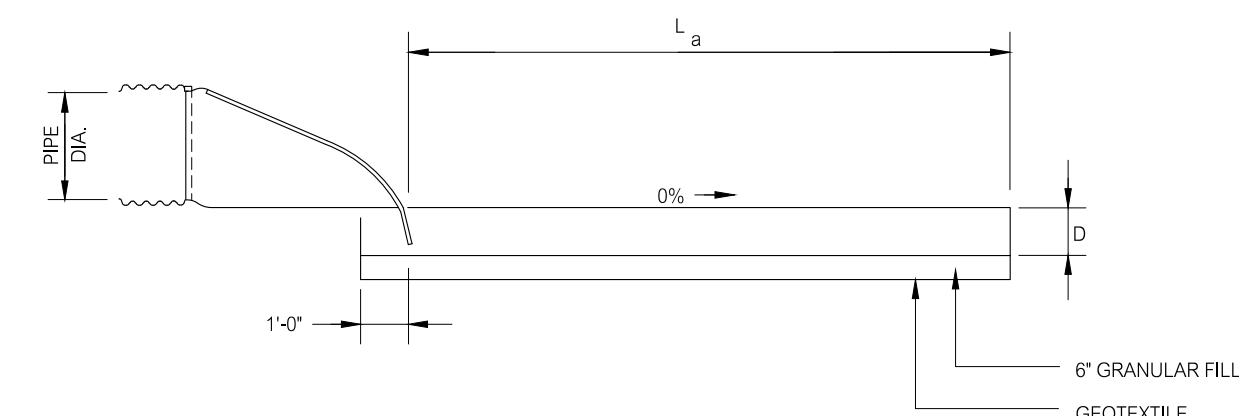


CAST IRON CATCH BASIN TRAP
NOT TO SCALE

NOTE:
CAST IRON CATCH BASIN TRAP MODEL R-3701-15 NEEHAH FOUNDRY, NEEHAH WISCONSIN OR APPROVED EQUAL.



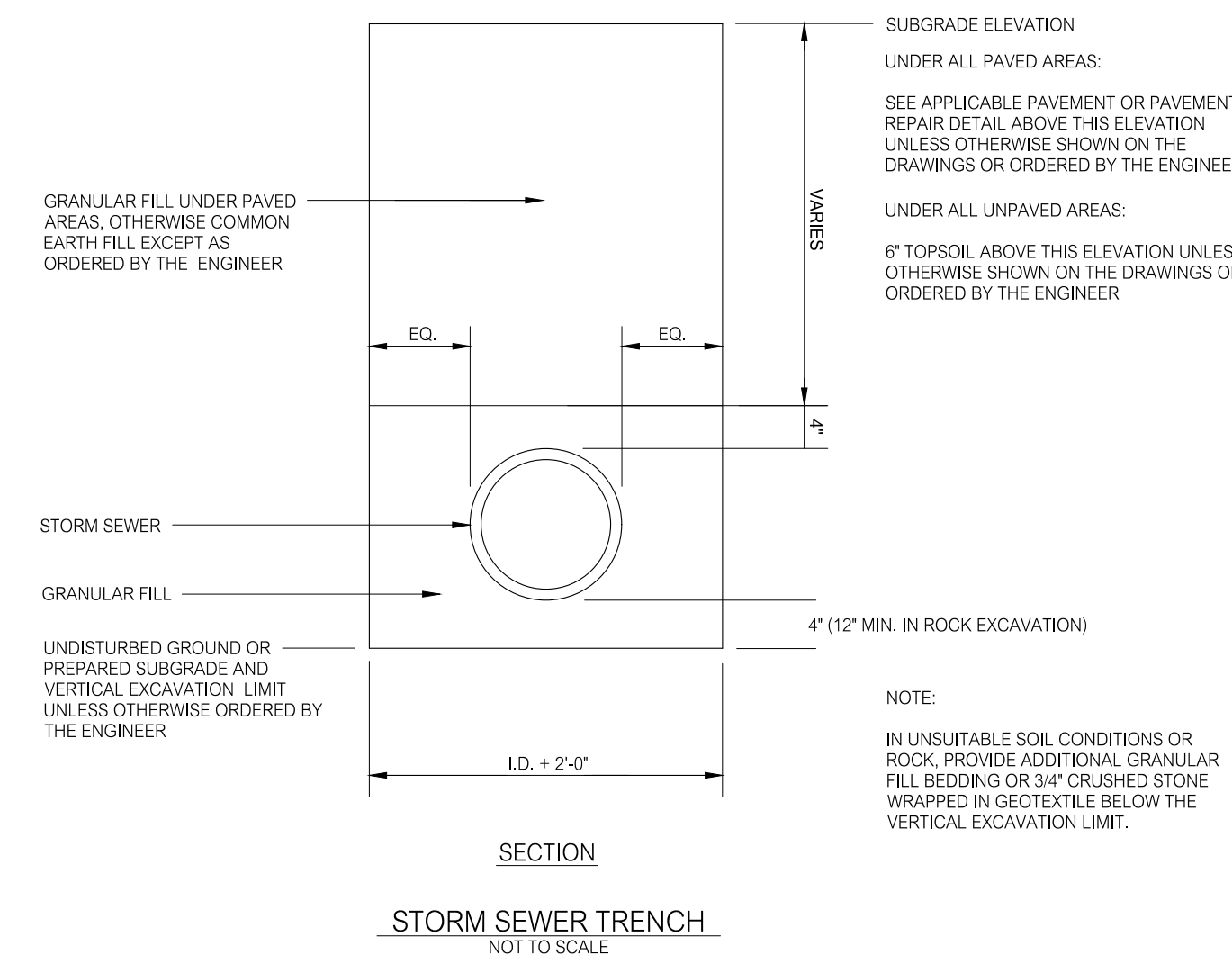
PLAN



SECTION A-A

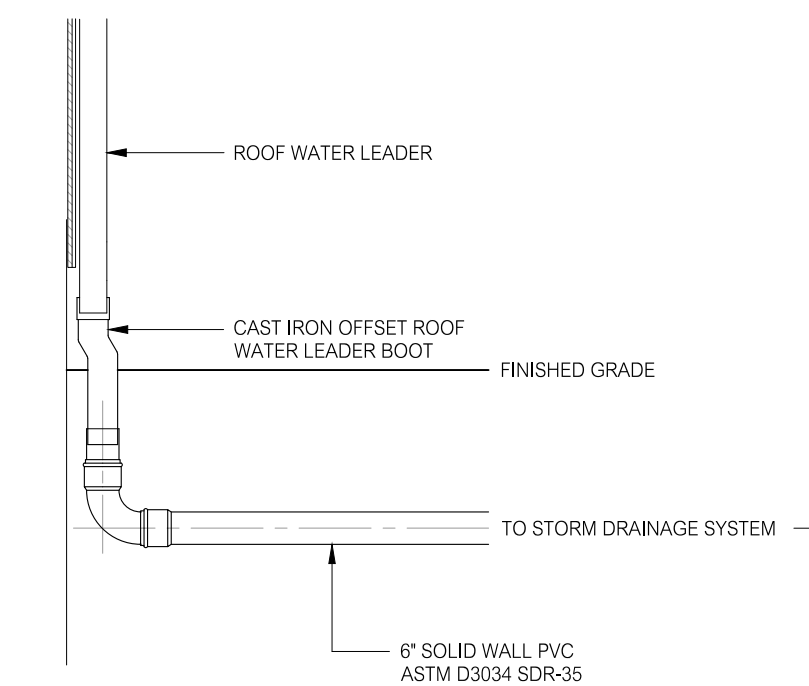
TYPE A AND B RIPRAP APRON
NOT TO SCALE

DIMENSIONS FOR TYPE A AND B RIPRAP APRON						
PIPE DIA. (IN)	L _a (FT)	W ₁ (FT)	W ₂ (FT)	X (FT)	D (FT)	RIPRAP TYPE
12	10	3	10	2.6	1.0	MODIFIED
15	10	4	11	3.1	1.0	MODIFIED
18	12	5	13	3.0	1.0	MODIFIED
24	12	6	15	2.7	1.0	MODIFIED
36	14	9	19	2.6	1.5	INTERMEDIATE



SECTION

STORM SEWER TRENCH
NOT TO SCALE

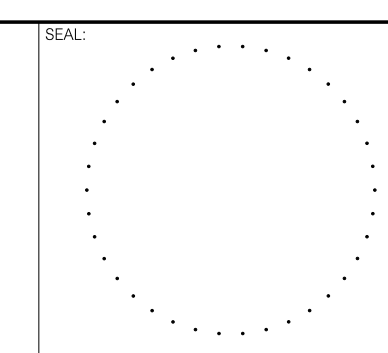


SECTION

BUILDING ROOF WATER LEADER CONNECTION
NOT TO SCALE

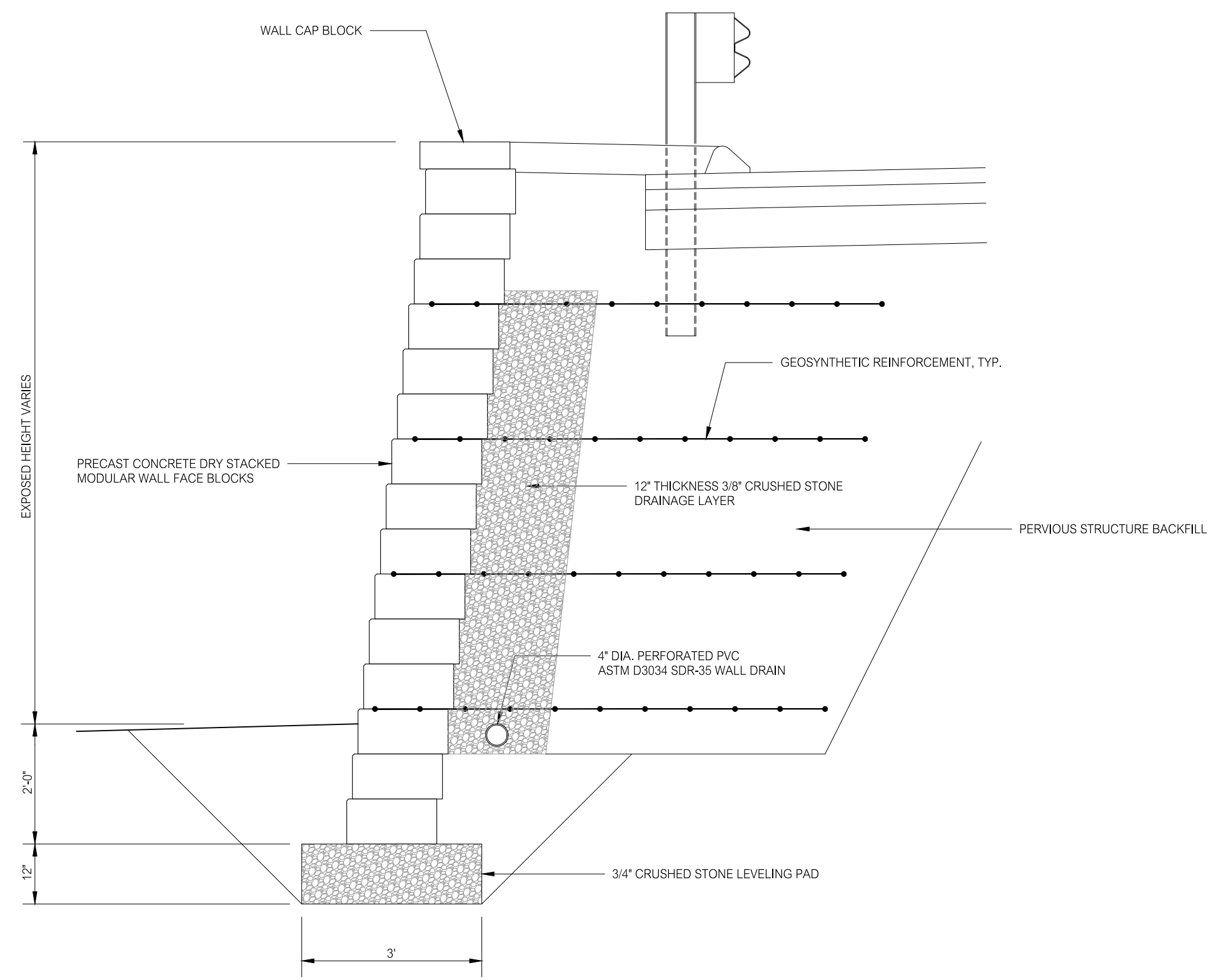
NO.	DATE	DESCRIPTION
REVISIONS		

LAND OF
GEORGE C. FIELD COMPANY, INC.
BOKUM ROAD
ESSEX, CONNECTICUT



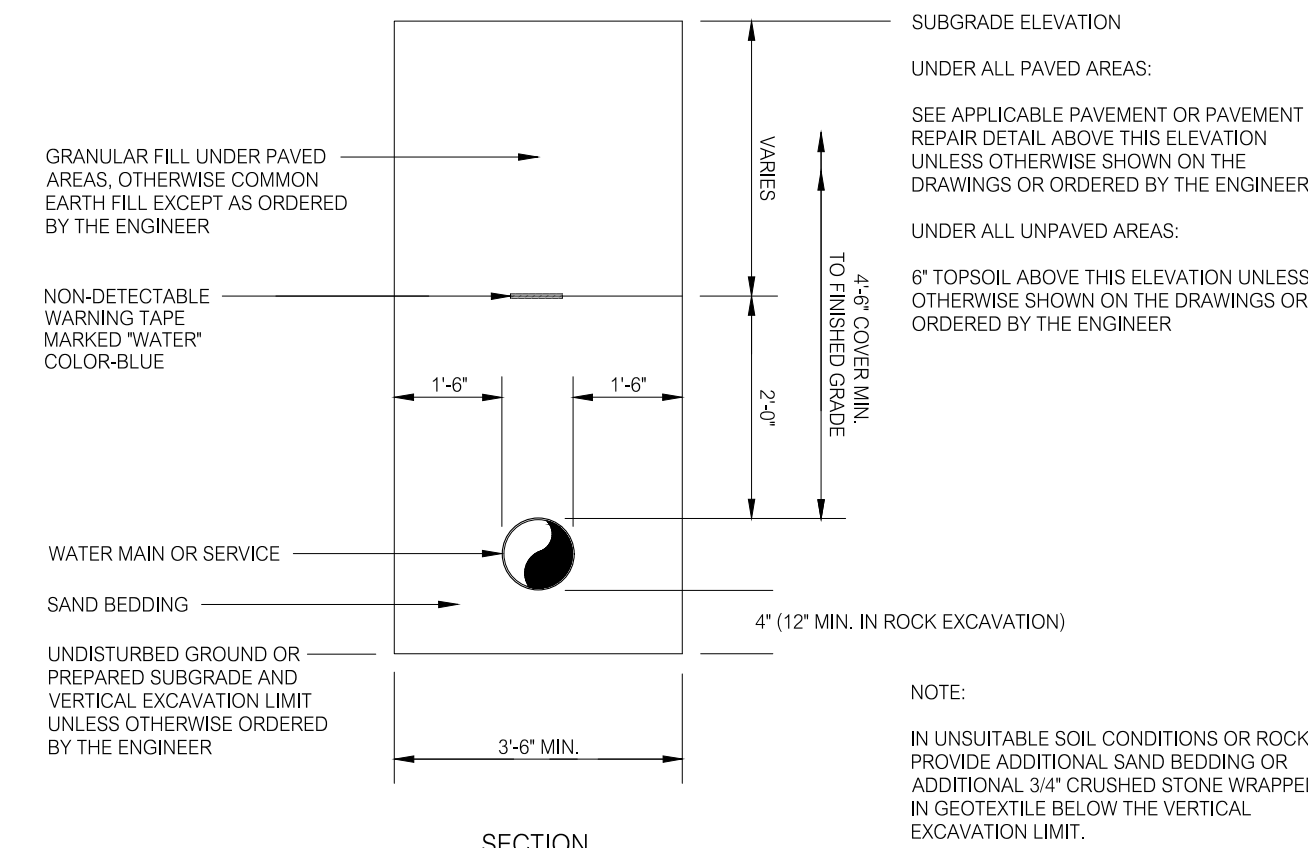
PREPARED BY:
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Telephone: (203) 245-0722

PROJECT:		SHEET:		SHEET NO.:	
BOKUM ROAD BUSINESS PARK BOKUM ROAD ESSEX, CONNECTICUT		DETAILS		C3.4	
DATE:	7-1-21	SCALE:	AS NOTED	DESIGNED:	MJO
CHECKED:	LJM	FIELD BOOK:		PROJECT NO.:	20-50

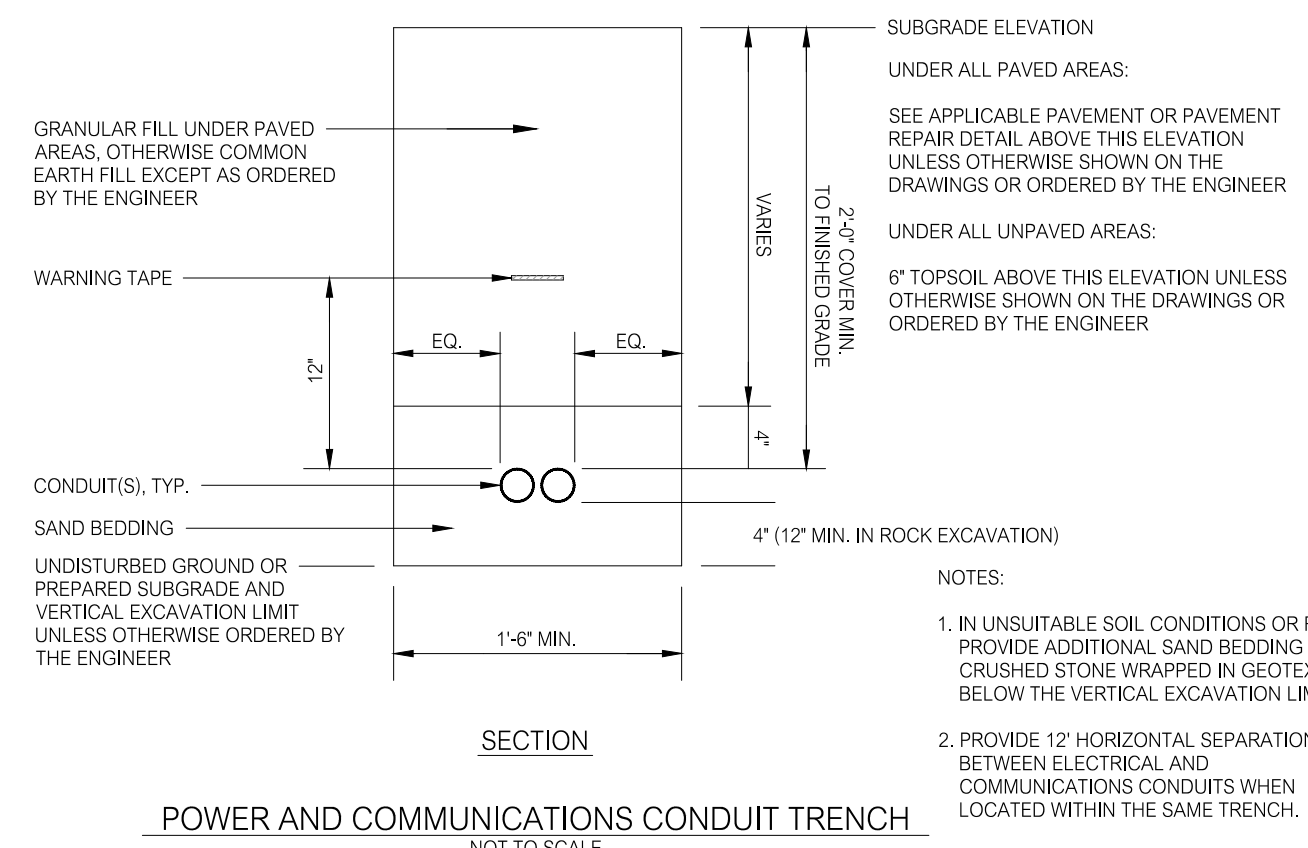


TYPICAL SOIL REINFORCED SEGMENTAL RETAINING WALL SECTION
1/2"=1'-0"

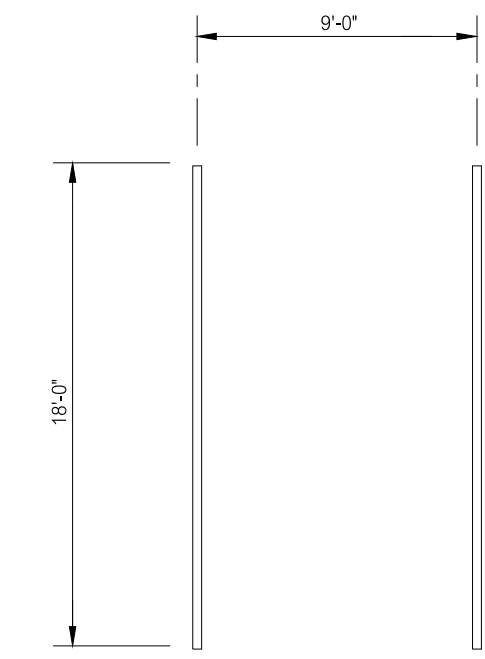
- NOTES:
- RETAINING WALL CONSTRUCTION WILL REQUIRE THE APPROVAL OF A BUILDING PERMIT APPLICATION BY THE TOWN OF ESSEX BUILDING DEPARTMENT.
 - SUBMIT DESIGN COMPUTATIONS AND CONSTRUCTION DRAWINGS FOR THE RETAINING WALL PREPARED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF CONNECTICUT.



SECTION
WATER MAIN OR SERVICE TRENCH
NOT TO SCALE

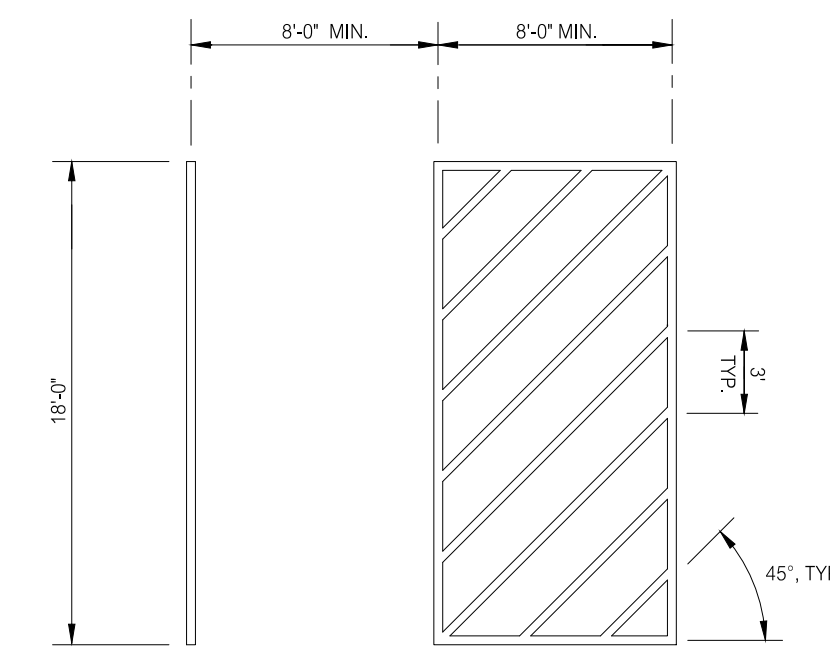


SECTION
POWER AND COMMUNICATIONS CONDUIT TRENCH
NOT TO SCALE



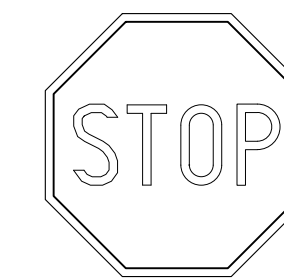
STANDARD PARKING STALL
NOT TO SCALE

- NOTE:
ALL LINES SHALL BE 4" WIDE, COLOR-WHITE.



VAN RESERVED PARKING STALL
NOT TO SCALE

- NOTES:
- ALL LINES SHALL BE 4" WIDE, COLOR-WHITE.
 - THE SLOPE OF THE PAVEMENT SURFACE WITHIN THE LIMITS OF THE RESERVED PARKING SPACE SHALL BE NO GREATER THAN 1:50 IN ANY DIRECTION.
 - STALL AND HATCHED AISLE WIDTHS SHOWN ARE MINIMUM WIDTHS.



SIGN NO.: R1 (31-0552)
SIZE: 30" X 30"
MOUNTING HEIGHT: 5'-0"

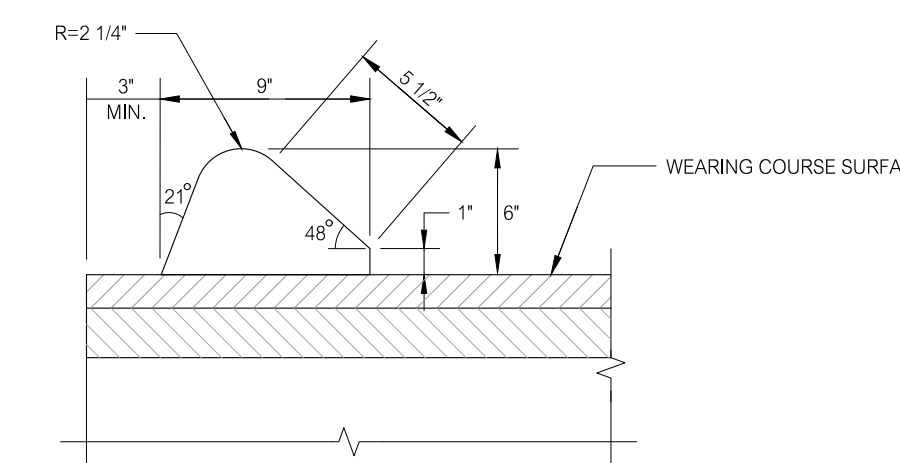
STOP SIGN
NOT TO SCALE



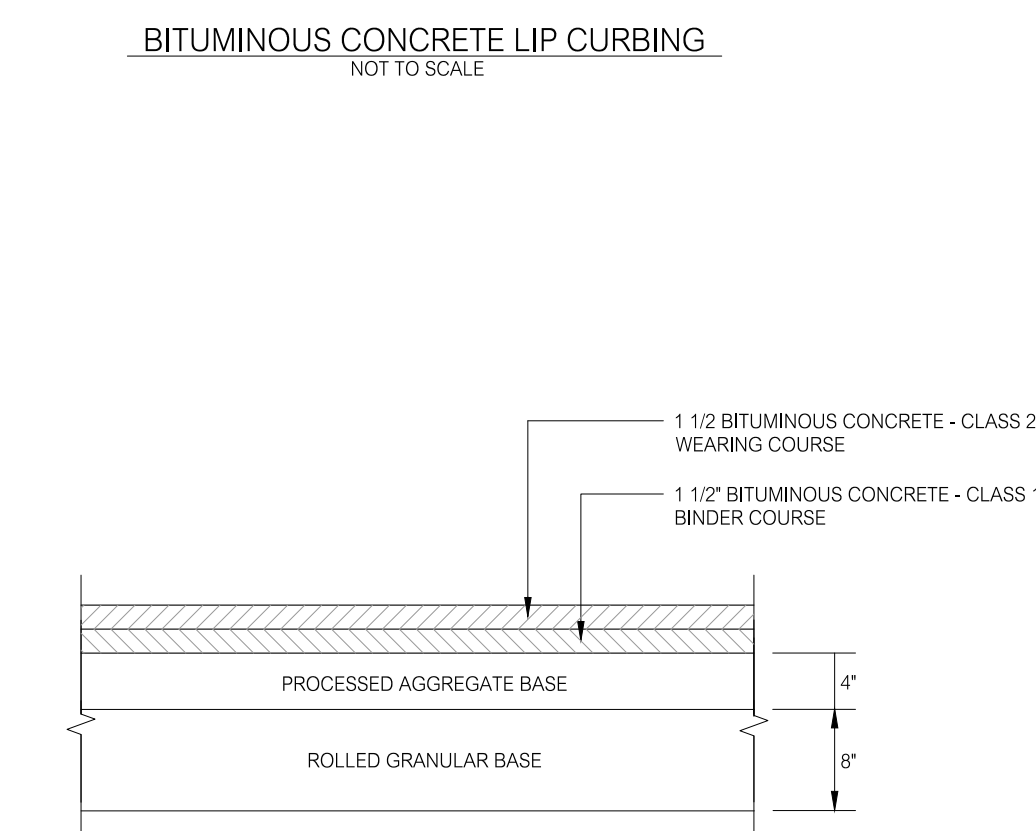
SIGN NO.: R7/R7-RP (31-0662/31-0648)
SIZE: 12" x 24" 1/2" x 6"
MOUNTING HEIGHT: 5'-0"

RESERVED PARKING SPACE SIGNS
NOT TO SCALE

- NOTE:
VAN ACCESSIBLE SUBPLATE INSTALLED AT VAN RESERVED PARKING STALLS ONLY.



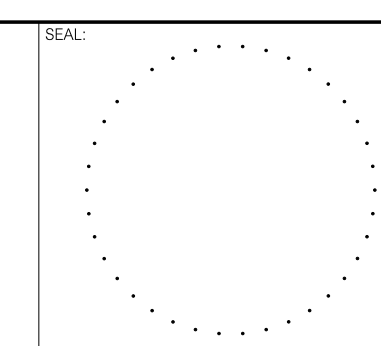
SECTION
BITUMINOUS CONCRETE LIP CURBING
NOT TO SCALE



PARKING AREA PAVEMENT SECTION
NOT TO SCALE

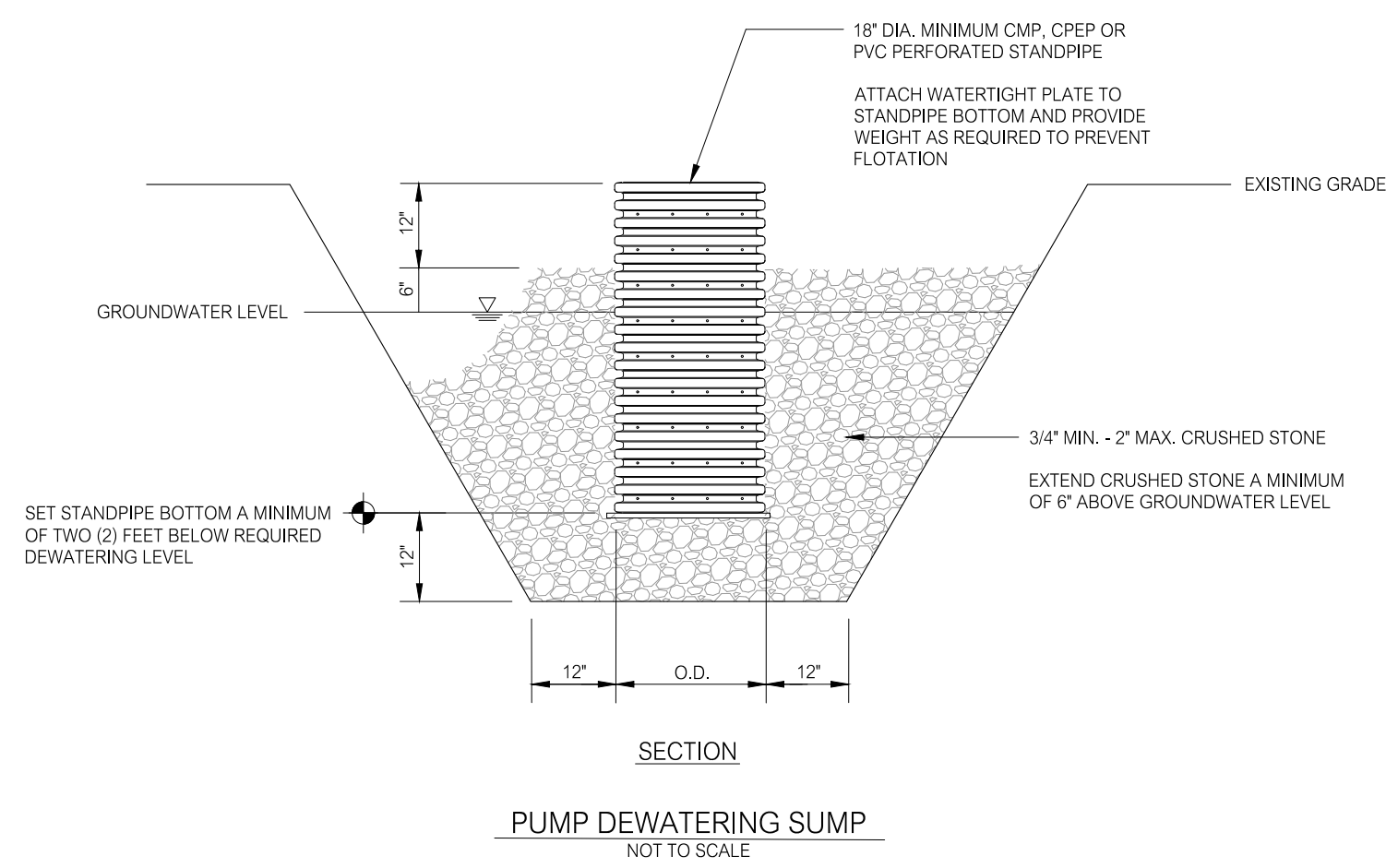
NO.	DATE	DESCRIPTION
REVISIONS		

LAND OF
GEORGE C. FIELD COMPANY, INC.
BOKUM ROAD
ESSEX, CONNECTICUT

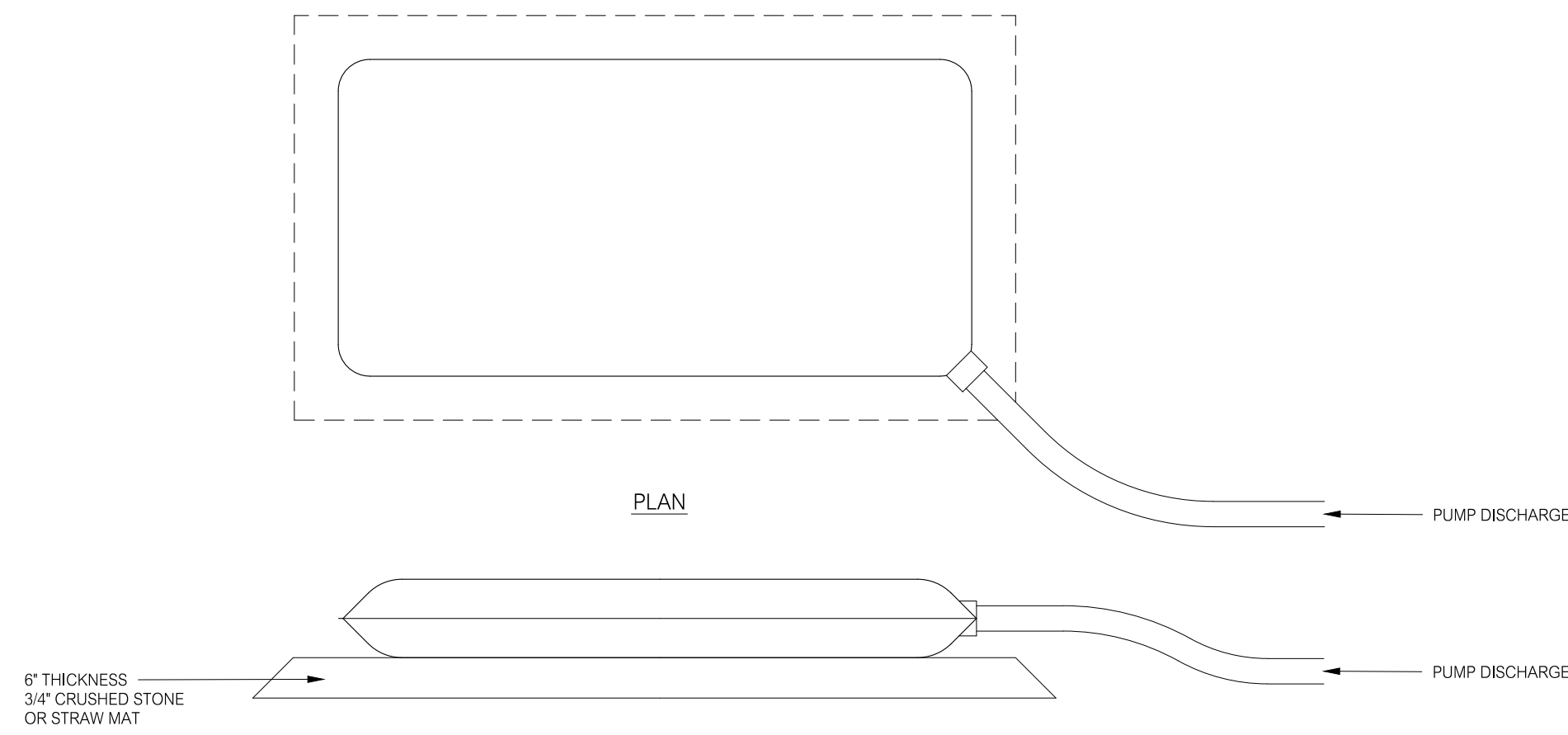


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PROJECT:		SHEET:		SHEET NO.:
BOKUM ROAD BUSINESS PARK		DETAILS		C3.5
BOKUM ROAD				
ESSEX, CONNECTICUT				
DATE: 7-1-21	SCALE: AS NOTED	DESIGNED: MJO	CHECKED: LJM	

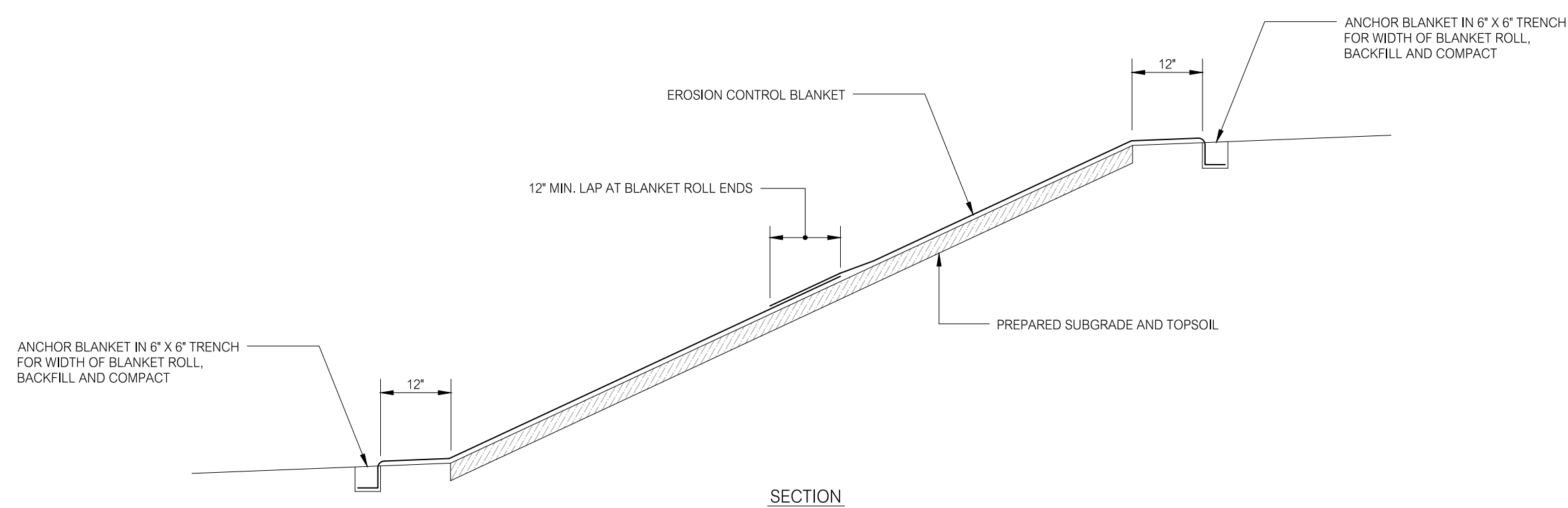


PUMP DEWATERING SUMP
NOT TO SCALE



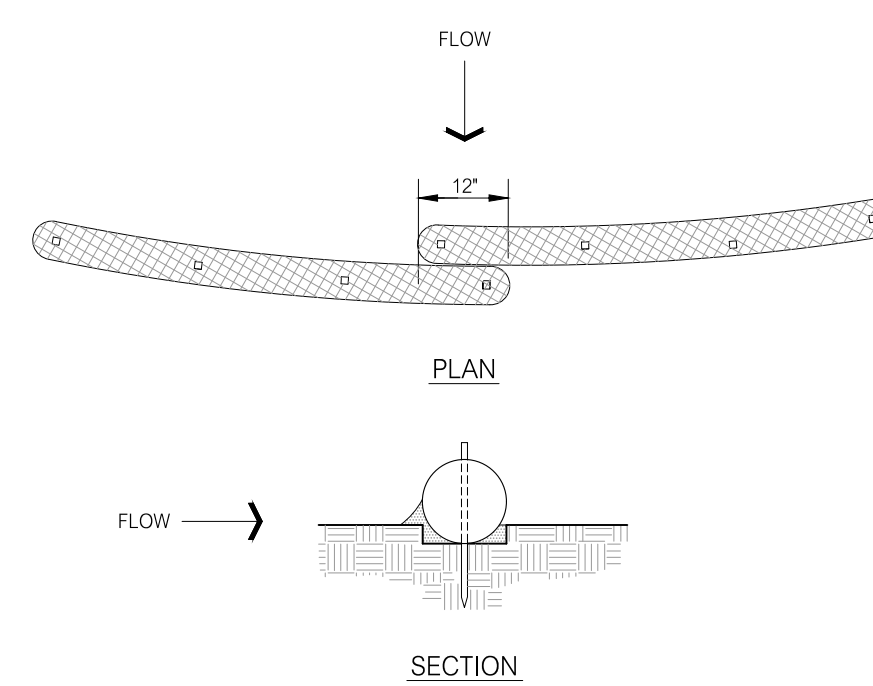
GEOTEXTILE FILTER BAG
NOT TO SCALE

- NOTES:
1. GEOTEXTILE FILTER BAG SHALL BE PLACED IN A LOCATION THAT MINIMIZES INTERFERENCE WITH CONSTRUCTION ACTIVITIES, IS A MINIMUM OF FIFTY (50) FEET FROM WETLANDS, WATERCOURSES AND SURFACE WATER BODIES, IS RELATIVELY LEVEL, PROVIDES FOR THE RELEASE OF FILTERED WATER WITHOUT CAUSING EROSION, AND PROVIDES FOR EASE OF ACCESS BY EQUIPMENT FOR CLEANOUT AND DISPOSAL OF TRAPPED SEDIMENT.
 2. PLACE GEOTEXTILE FILTER BAG ON A 6\"/>



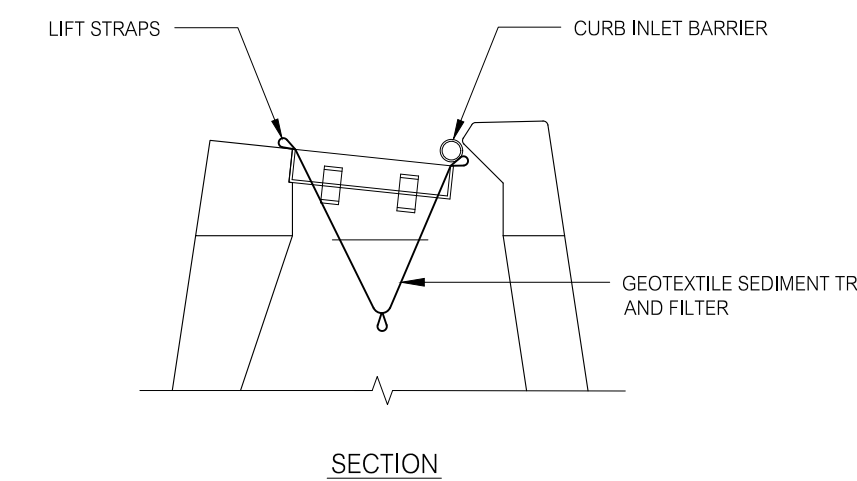
ECB EROSION CONTROL BLANKETS FOR SLOPES
NOT TO SCALE

- NOTES:
1. INSTALL EROSION CONTROL BLANKETS ON ALL SLOPES STEEPER THAN 4 HORIZONTAL TO 1 VERTICAL.
 2. AMEND TOPSOIL AS REQUIRED AND SEED PRIOR TO INSTALLATION OF EROSION CONTROL BLANKETS.
 3. INSTALL EROSION CONTROL BLANKETS IN ACCORDANCE WITH THE MANUFACTURERS INSTRUCTIONS.
 4. SEE MANUFACTURERS INSTRUCTIONS FOR STAPLE AND STAPLE PATTERN REQUIREMENTS.



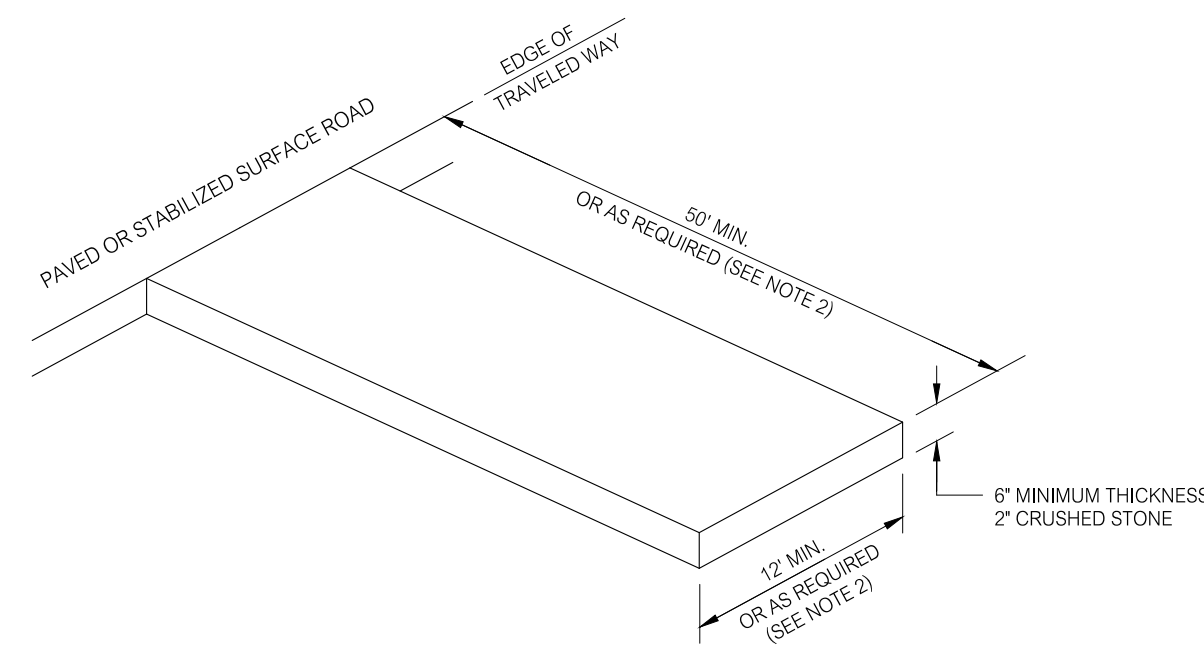
SW STRAW WATTLE BARRIER
NOT TO SCALE

1. EXCAVATE 4\"/>



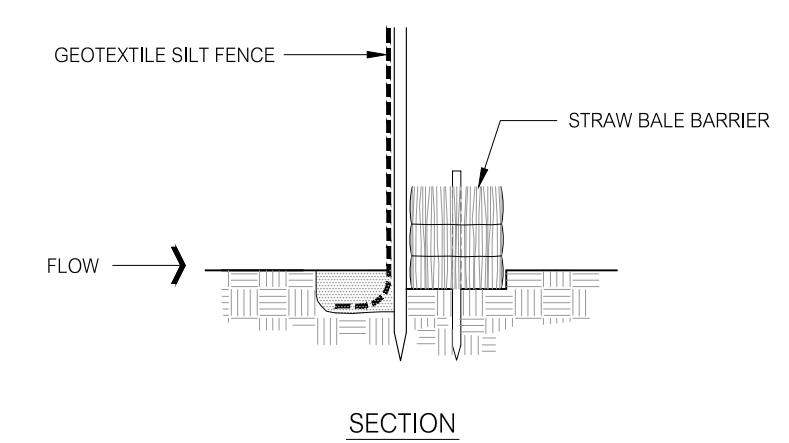
SC SEDIMENTATION CONTROL AT DRAINAGE STRUCTURE
NOT TO SCALE

1. PLACE GEOTEXTILE SEDIMENT TRAP AND FILTER UNDER GRATE AND SET IN FRAME.
 2. PLACE CURB INLET BARRIER AGAINST CURB INLET OPENING.
 1. INSPECT DRAINAGE STRUCTURE INLETS AT LEAST ONCE PER WEEK AND WITHIN 24 HOURS OF THE END OF A STORM WITH A RAINFALL AMOUNT OF 1/2 INCH OR GREATER.
 2. REMOVE SEDIMENT TRAP AND FILTER WHEN 1/2 FULL. DISPOSE OF SEDIMENT, CLEAN AND RE-INSTALL THE SEDIMENT TRAP.
- NOTE:
TYPE \"C\" CATCH BASIN SHOWN. THIS DETAIL APPLIES TO ALL DRAINAGE STRUCTURE INLET TYPES SHOWN ON THE DRAWINGS.



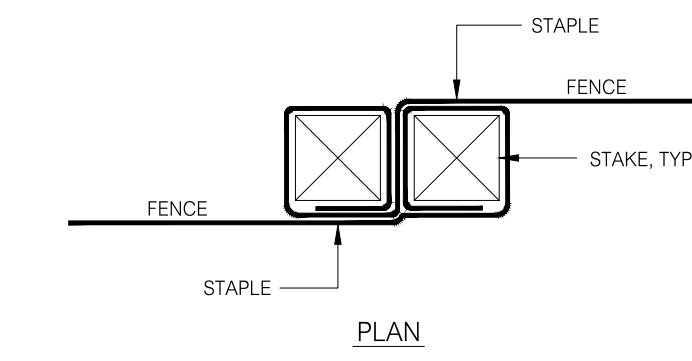
CE CONSTRUCTION ENTRANCE
NOT TO SCALE

- NOTES:
1. CLEAR AND GRUB AREA AND REMOVE TOPSOIL BEFORE PLACEMENT OF CRUSHED STONE LAYER. A GEOTEXTILE MAY BE REQUIRED TO STRENGTHEN SUBGRADE SOILS AND TO PREVENT STONE MOVEMENT AND LOSS OF VOIDS WITHIN THE STONE ENTRANCE WHERE REQUIRED.
 2. LENGTH OF ENTRANCE MAY BE LIMITED BY SITE CONDITIONS. PROVIDE ADEQUATE WIDTH OF ENTRANCE AT ROAD INTERSECTION TO ACCOMMODATE THE TURNING MOVEMENTS OF CONSTRUCTION VEHICLES.
 3. MAINTAIN ENTRANCE SO AS TO PREVENT TRACKING OR WASHING OF SEDIMENT ONTO ROAD. SEDIMENT THAT MAY BE TRACKED OR OTHERWISE DEPOSITED WITHIN THE ROAD SHALL BE REMOVED IMMEDIATELY.
 4. MAINTENANCE MAY INCLUDE THE REQUIREMENT FOR TOP DRESSING THE CRUSHED STONE LAYER OR REPLACING THE FULL DEPTH OF THE CRUSHED STONE LAYER.
 5. SHOULD SITE CONDITIONS BE SUCH THAT SOIL CANNOT BE REMOVED BY VEHICLES TRAVELING OVER THE ENTRANCE, THE TIRES OF VEHICLES MAY HAVE TO BE WASHED PRIOR TO VEHICLES ENTERING THE ROAD. ALL WASH WATER SHALL BE DIRECTED THROUGH AN APPROVED SEDIMENT FILTER OR TO A SEDIMENT BASIN.



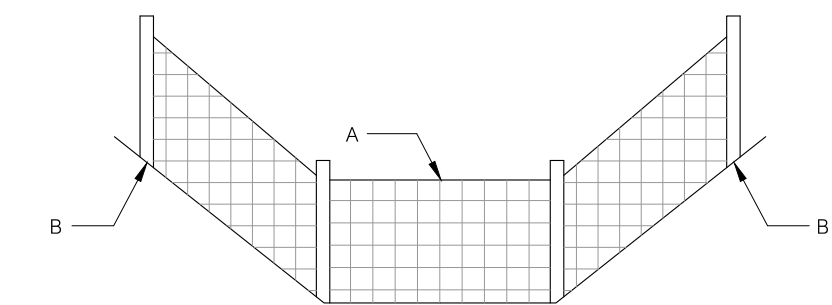
GEOTEXTILE SILT FENCE AND STRAW BALE SEDIMENT BARRIER
NOT TO SCALE

NOTE:
SEE GEOTEXTILE SILT FENCE AND STRAW BALE BARRIER DETAILS THIS SHEET.



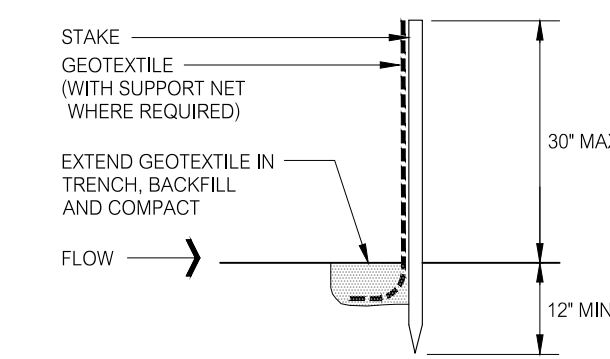
FENCE JOINT DETAIL

NOTE:
DRIVE STAPLES TIGHTLY TOGETHER AND SECURE TOPS OF STAPLES WITH CORD OR WIRE TO PREVENT FLOW-THROUGH OF SEDIMENT.

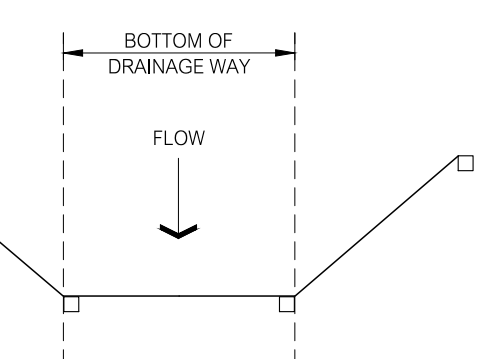


ELEVATION

NOTE:
WHEN NOT INSTALLED ON THE CONTOUR OR WHEN INSTALLED IN A DRAINAGE WAY, THE ELEVATION OF POINTS B SHALL BE HIGHER THAN POINT A.



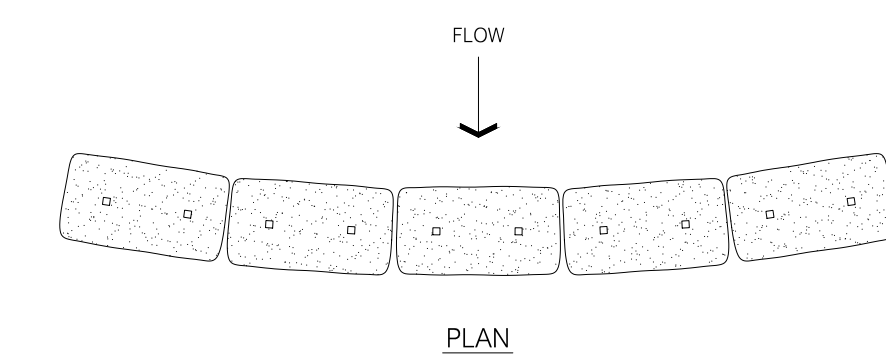
SECTION



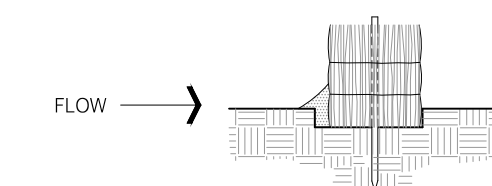
PLAN

GSP GEOTEXTILE SILT FENCE
NOT TO SCALE

1. EXCAVATE 6\"/>



PLAN



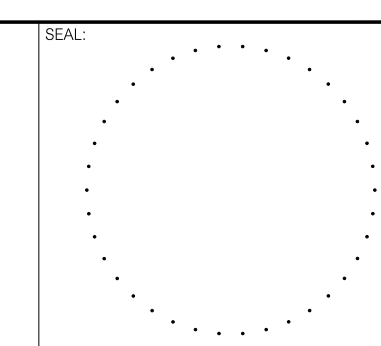
SECTION

HB STRAW BALE BARRIER
NOT TO SCALE

1. EXCAVATE 4\"/>

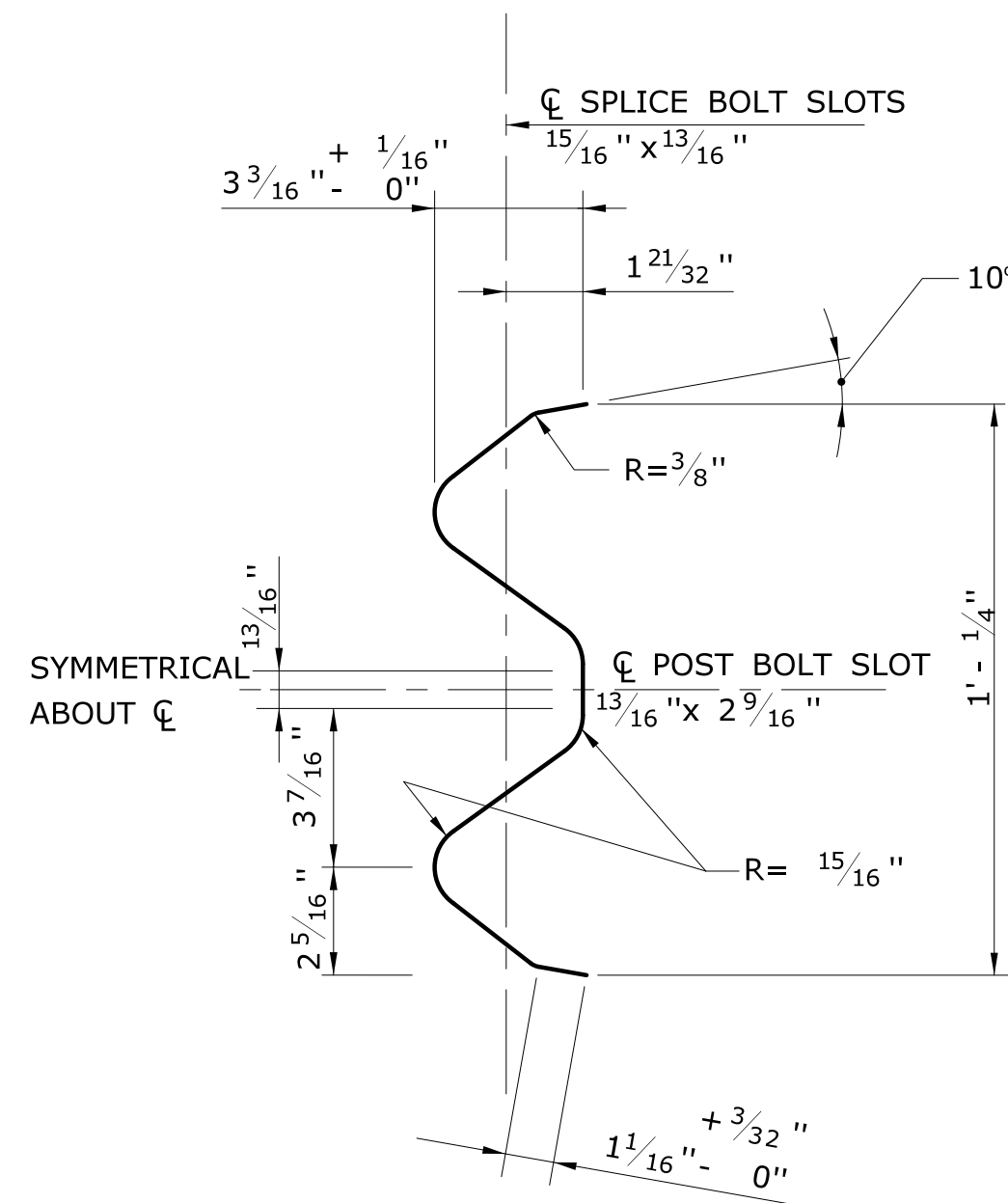
NO.	DATE	DESCRIPTION
REVISIONS		

LAND OF
GEORGE C. FIELD COMPANY, INC.
BOKUM ROAD
ESSEX, CONNECTICUT



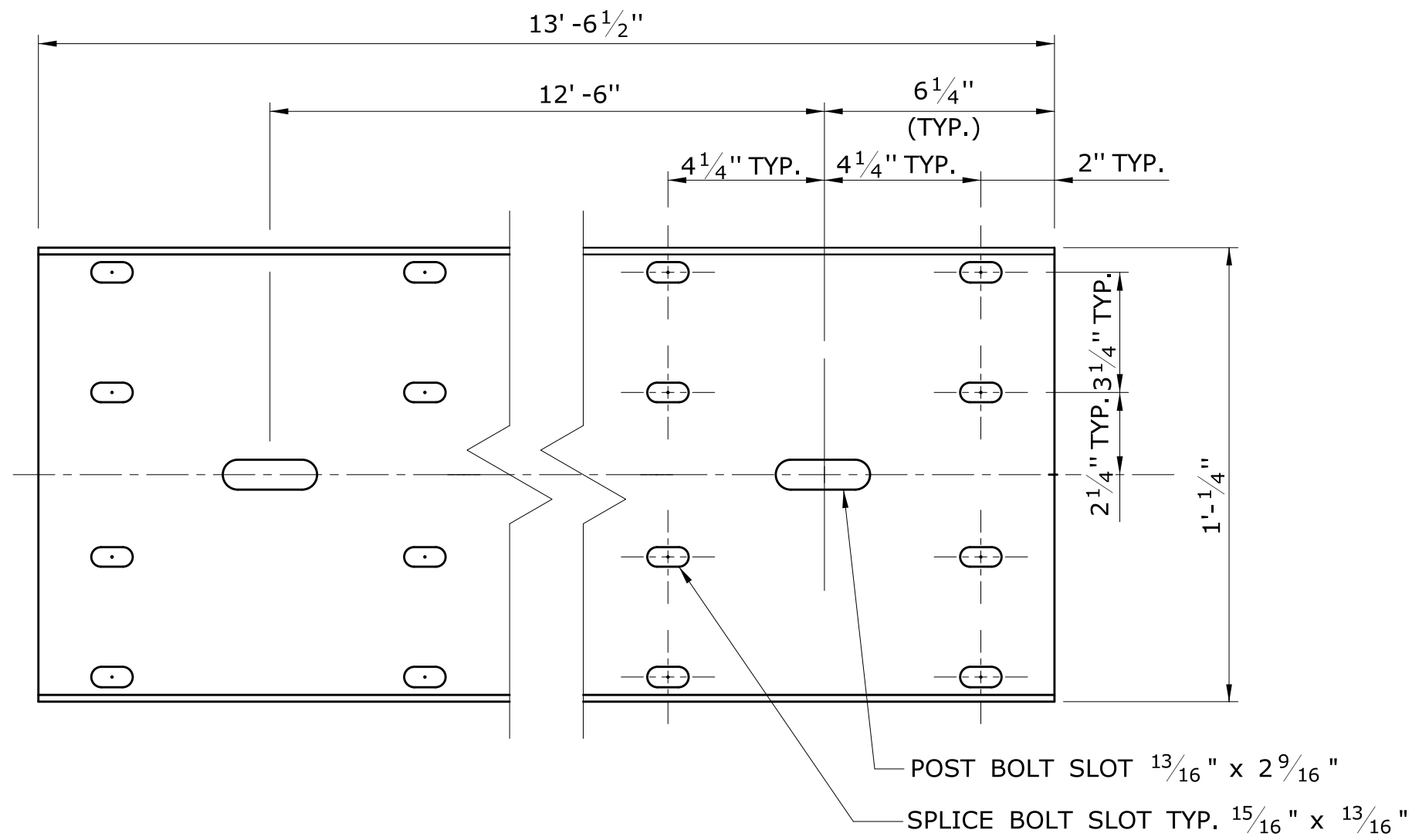
PREPARED BY:
Summer Hill
Civil Engineers & Land Surveyors, P.C.
60 Wall Street
P.O. Box 708
Madison, Connecticut 06443-0708
Telephone: (203) 245-0722

PROJECT: BOKUM ROAD BUSINESS PARK BOKUM ROAD ESSEX, CONNECTICUT		SHEET: DETAILS	SHEET NO.: C3.6
DATE: 7-1-21	SCALE: AS NOTED	DESIGNED: MJO	CHECKED: LIM
FIELD BOOK: -		PROJECT NO.: 20-50	

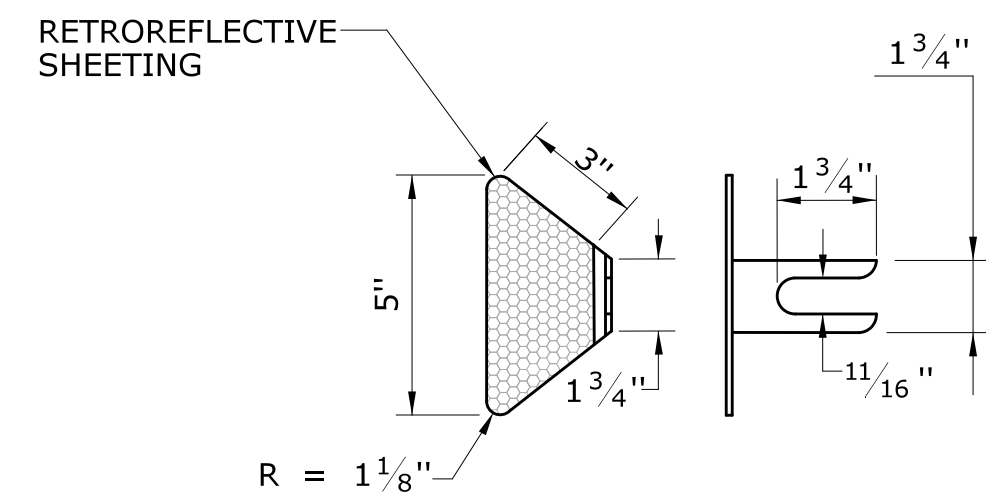


SECTION VIEW

TYPICAL W-BEAM RAIL ELEMENT



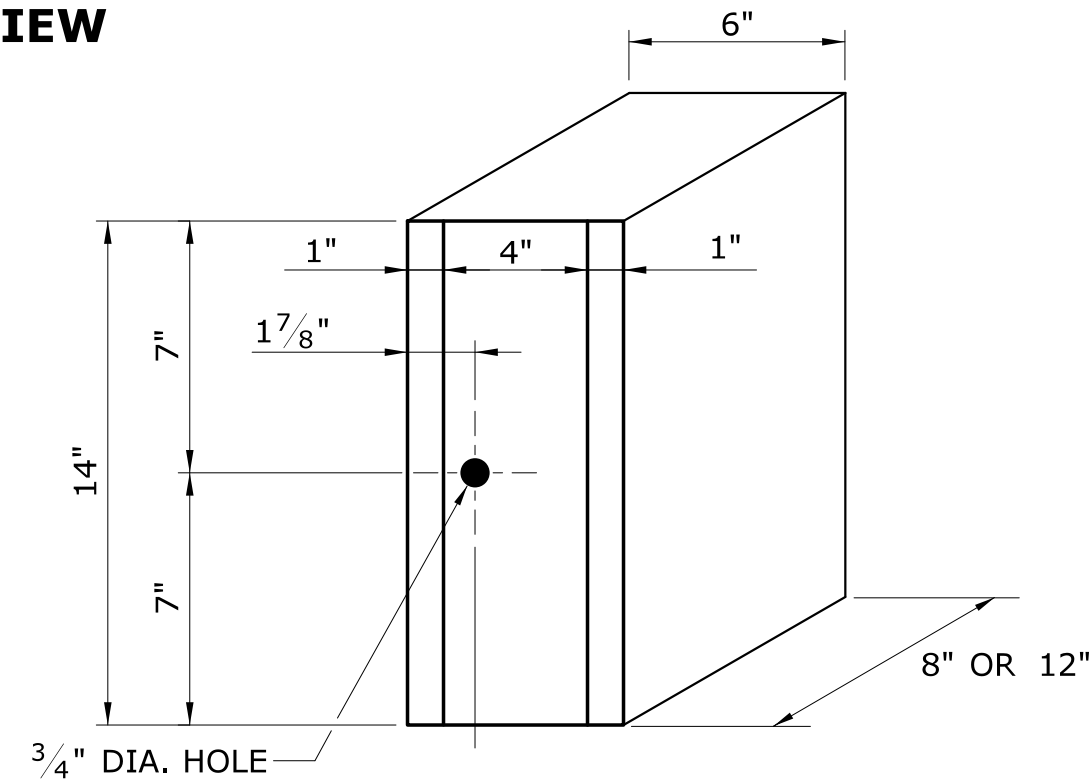
ELEVATION VIEW



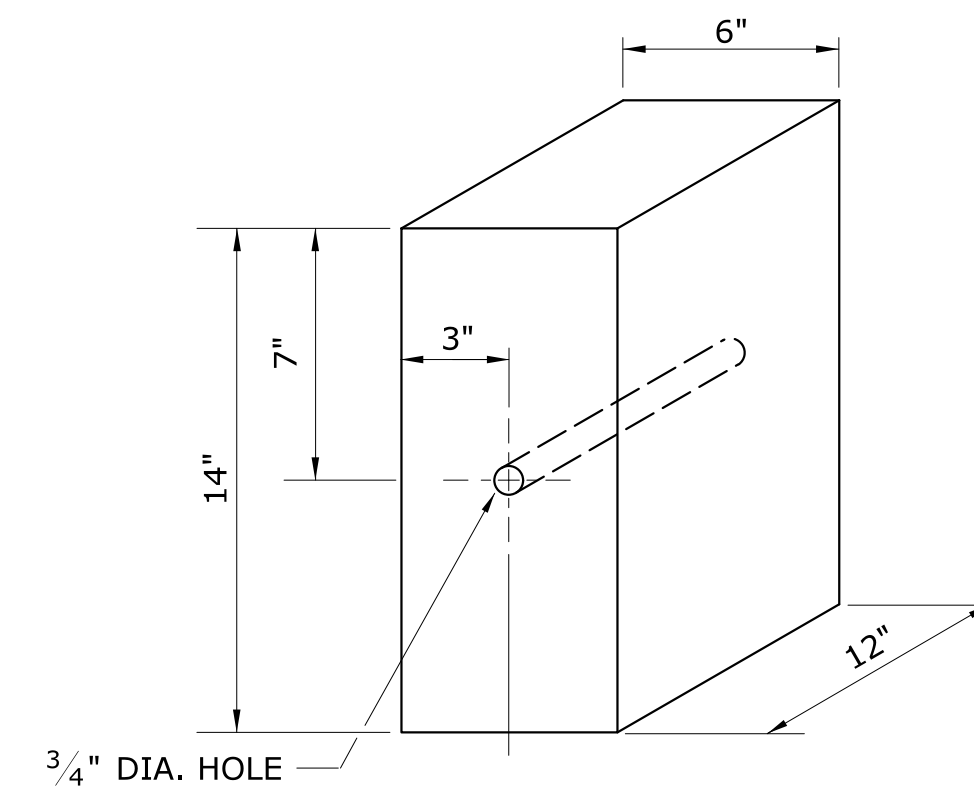
W-BEAM DELINEATOR

GENERAL NOTES:

1. W6 x 9 POSTS MAY BE USED IN PLACE OF W6 x 8.5 POSTS.
2. W-BEAM GUIDERAIL SHALL USE CLASS A (12 GAUGE), TYPE II W-BEAM RAIL ELEMENTS.
3. SEVEN FOOT LONG STEEL POSTS (W6 X 8.5) ARE TO BE INSTALLED WHERE INDICATED ON THE PLANS OR AS DIRECTED BY THE ENGINEER.
4. ALL DIMENSIONS SUBJECT TO MANUFACTURING TOLERANCES



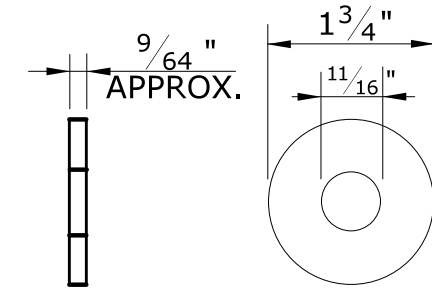
8" or 12" PLASTIC BLOCKOUT
NOMINAL DIMENSIONS



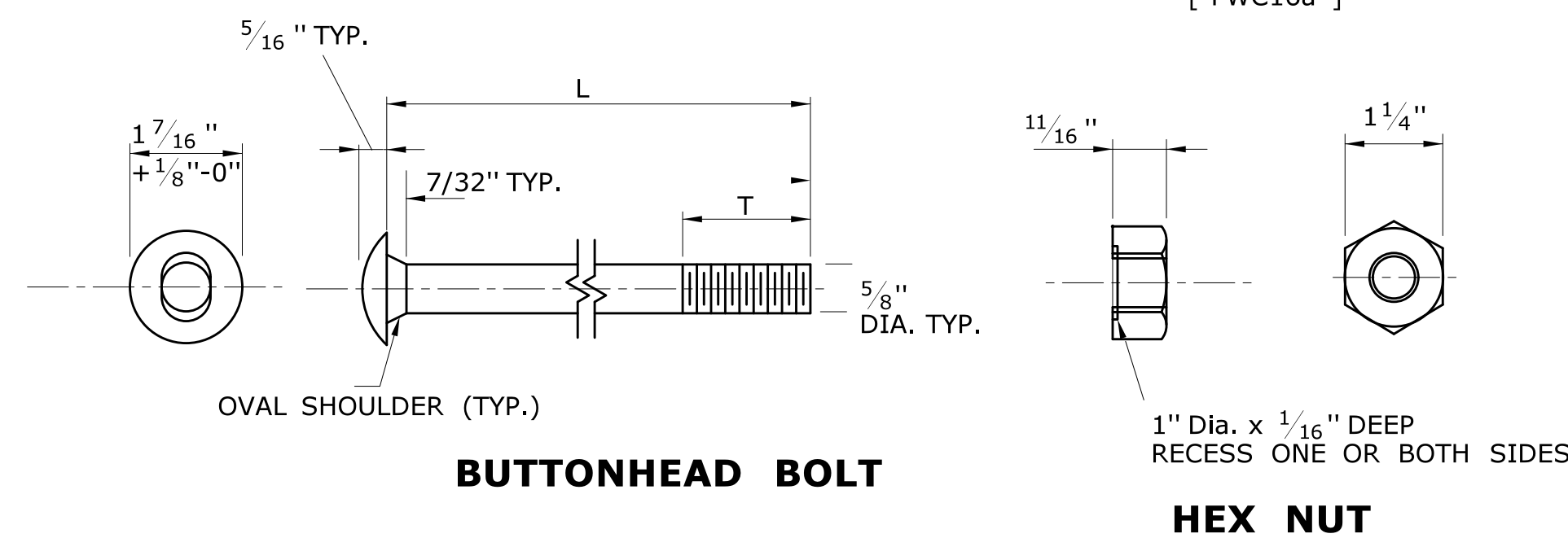
12" WOOD BLOCKOUT

W-BEAM DELINEATOR INSTALLATION NOTES:

1. INSTALL W-BEAM DELINEATORS ON RAIL THAT IS PARALLEL TO AND NOT GREATER THAN 8' FROM THE EDGE OF THE ROADWAY. A MINIMUM OF THREE W-BEAM DELINEATORS SHALL BE INSTALLED ON ANY LENGTH OF GUIDERAIL.
2. THE SPACING OF W-BEAM DELINEATORS IS 50 FEET, INSTALLED AT RAIL SPLICE LOCATIONS. SPACING IS 25 FEET ON RADII LESS THAN 300 FEET.
3. NO W-BEAM DELINEATORS ARE PERMITTED WITHIN 75 FEET OF THE IMPACT HEAD OF ANY TANGENTIAL OR FLARED IMPACT ATTENUATION SYSTEM.
4. RETROREFLECTIVE SHEETING SHALL BE WHITE EXCEPT ON THE LEFT SIDE OF DIVIDED STREETS, HIGHWAYS, RAMPS, AND ONE WAY ROADS IN THE DIRECTION OF TRAVEL WHERE IT SHALL BE YELLOW.



WASHER
[FWC16a]

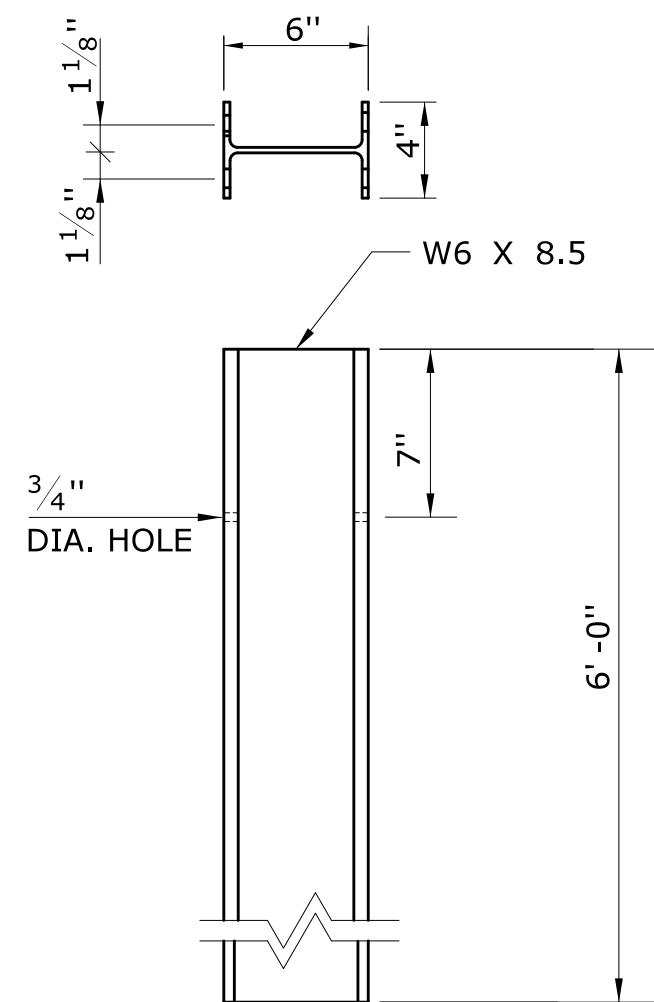


5/8" BUTTON HEAD BOLT(S) AND RECESSED NUT(S)

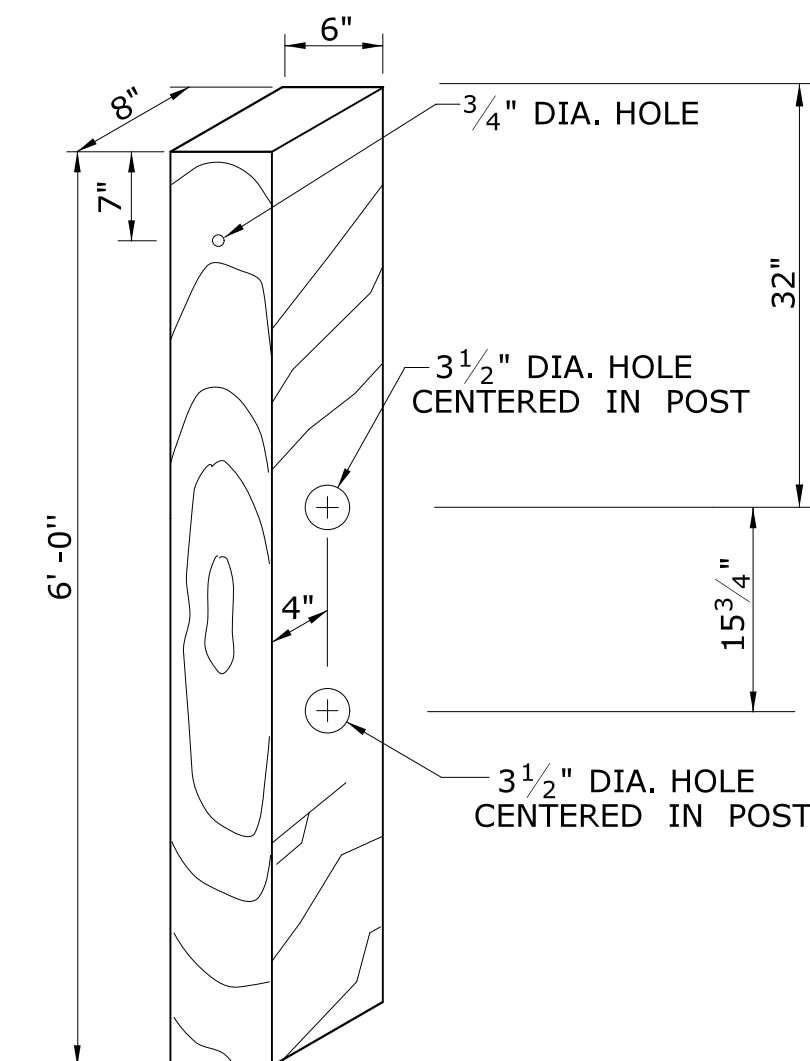
DESIGNATOR	L	T	INTENDED USE
FBB01	1-1/4"	1-1/8"	RAIL SPLICE BOLTS
FBB02	2"	1-3/4"	RUB RAIL BOLTS
FBB03	10"	4"	POST BOLTS (8" BLOCK OUTS)
	14"	4"	POST BOLT (12" BLOCK OUTS)
FBB04	18"	4"	POST BOLTS (2- 8" BLOCK OUTS)
	22"	4"	POST BOLT (CRT WOOD POST SYSTEM)

5/8" BUTTON HEAD BOLT(S) AND RECESSED NUT(S)

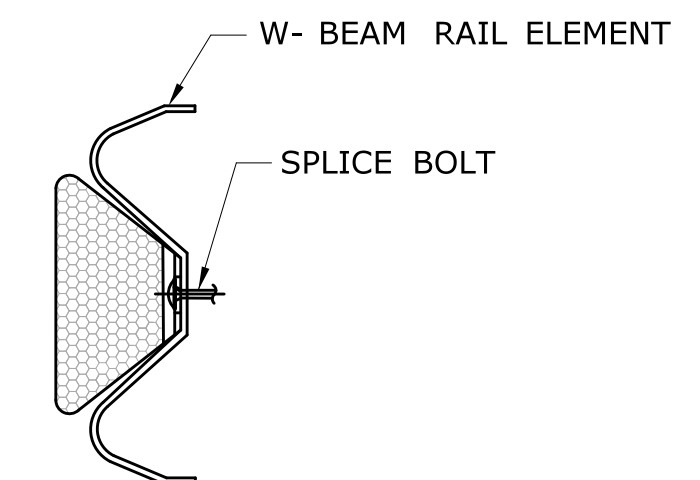
NOTE: AFTER GALVANIZING, THE NUT SHALL BE FREE RUNNING ON THE BOLT. DIAMETER SHOWN IS TYPICAL FOR ALL GUIDERAIL BOLTS. SEE DETAILS ABOVE FOR SPECIFIC LENGTHS.



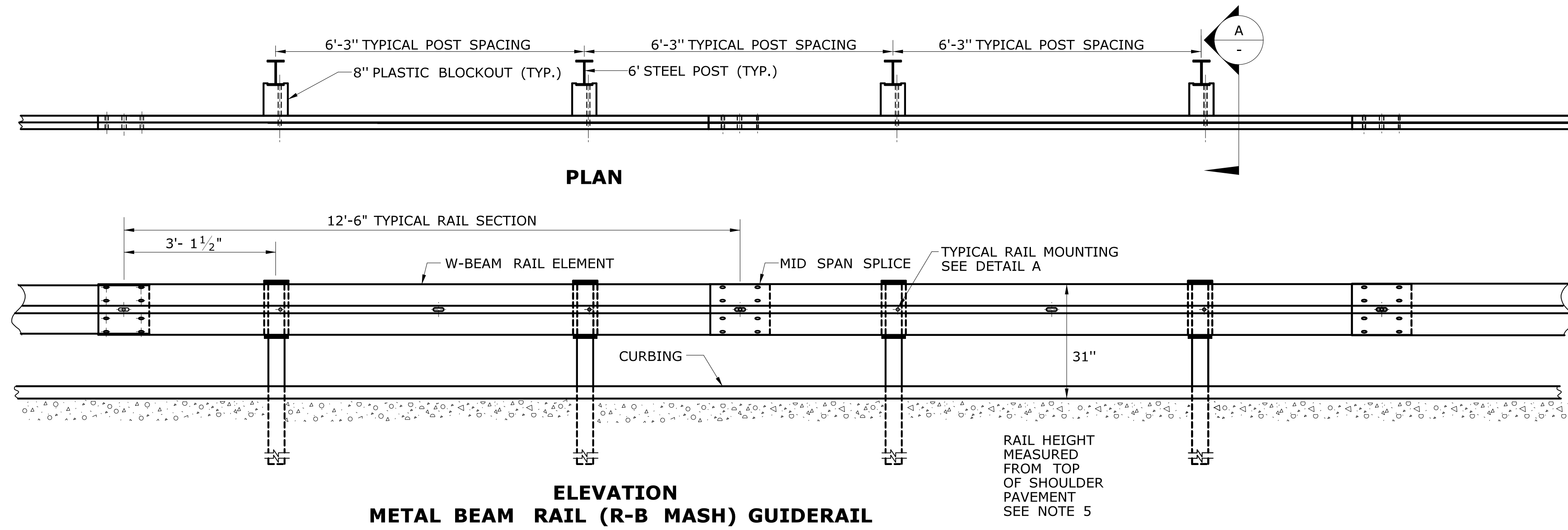
STEEL POST
6'-0" LONG



CONTROL RELEASE TIMBER (CRT) POST
6'-0" LONG

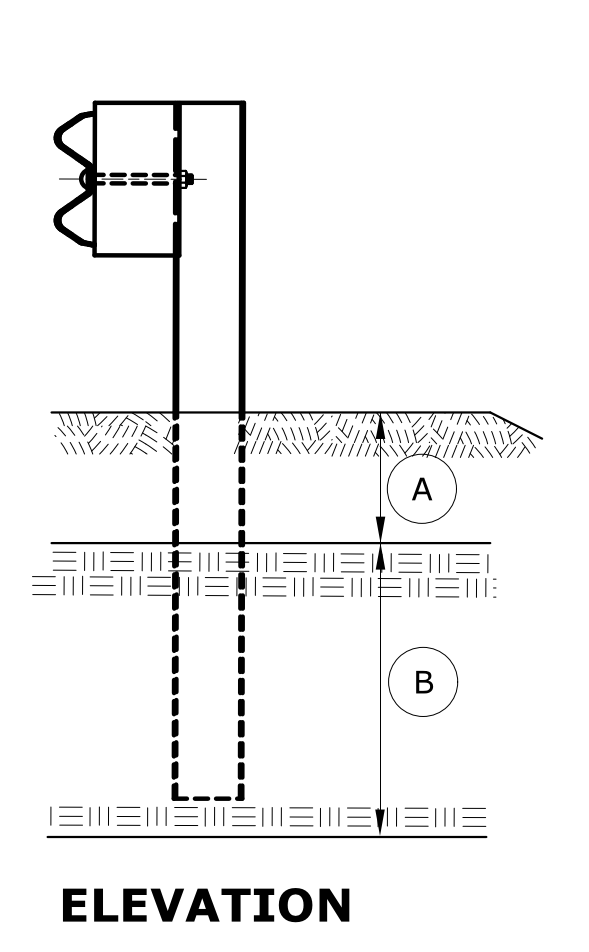


W-BEAM DELINEATOR
INSTALLATION



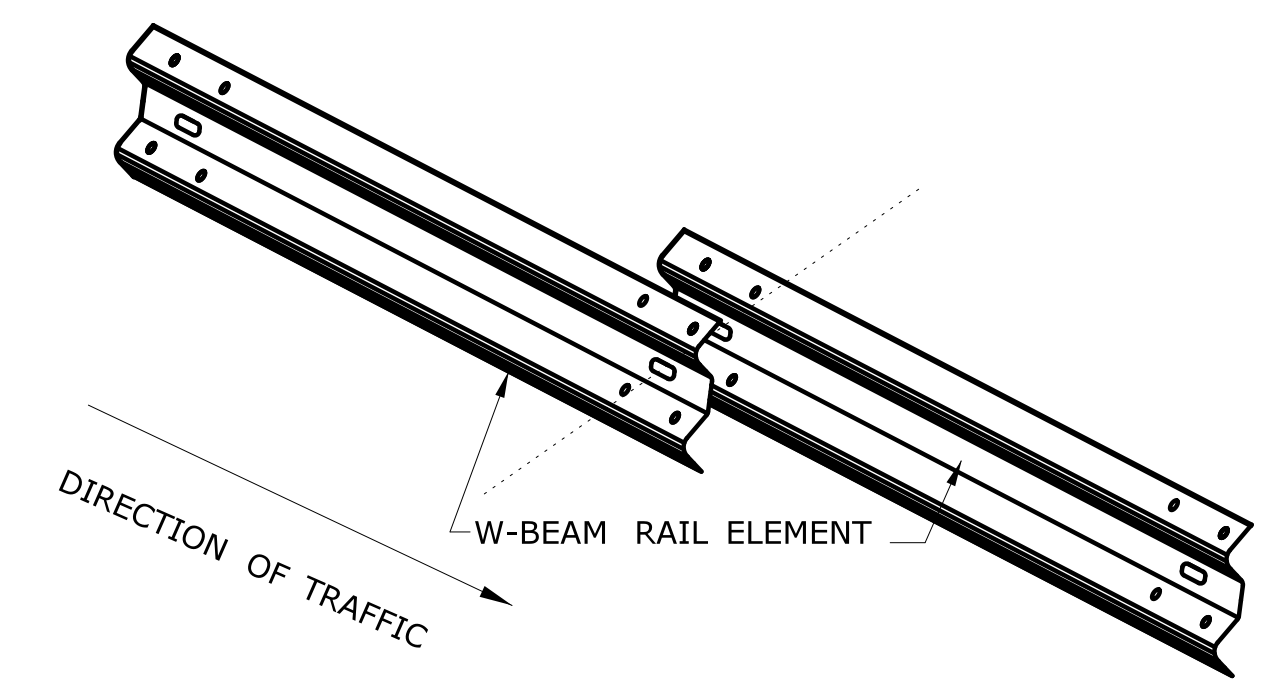
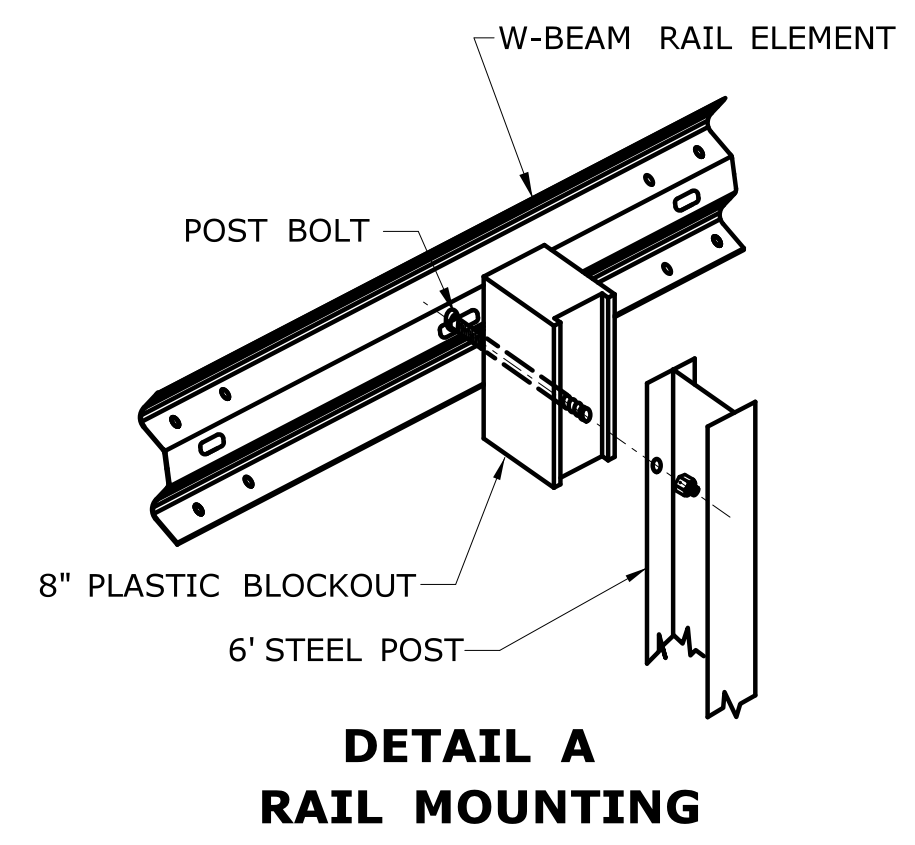
GENERAL NOTES:

1. SEE SHEET HW-910_20 FOR MASH W-BEAM HARDWARE AND W-BEAM DELINEATOR DETAILS.
2. THREE BLOCKOUTS MAY BE USED FOR ONE POST ONLY. TWO BLOCKOUTS MAY BE USED FOR A SERIES OF POSTS. THE COST OF ADDITIONAL BLOCKOUTS AND LONGER BOLTS SHALL BE INCLUDED IN THE PRICE PER FOOT OF GUIDERAIL. EXTRA BLOCKOUTS AT TRANSITIONS TO BRIDGE PARAPETS SHOULD BE AVOIDED. DO NOT USE ADDITIONAL BLOCKS IF IT CAUSES THE POST TO BE DRIVEN BEYOND AN EMBANKMENT HINGE POINT OR CAUSES A FIXED OBJECT TO BE WITHIN THE DEFLECTION DISTANCE OF THE BARRIER.
3. IF BLOCKOUTS DO NOT AVOID POST FROM OBSTRUCTION, ONE POST MAY BE OMITTED IF 50 FEET OF GUIDERAIL EXISTS ON BOTH SIDES OF LOCATION. USE METAL BEAM RAIL SPAN SECTION TYPE II OR III FOR MORE THAN ONE CONSECUTIVE OMITTED POST, SEE SHEET HW-910_24.
4. W-BEAM GUIDERAIL MAY BE PLACED 1' OR MORE FROM THE EDGE OF PAVEMENT ONLY ON SLOPES 10:1 OR FLATTER AND WITHOUT CURBING.
5. IF THE RAIL IS INSTALLED WITHIN 2' OF THE EDGE OF PAVEMENT, THE RAIL HEIGHT IS MEASURED FROM THE SHOULDER SLOPE EXTENDED TO THE RAIL. IF THE RAIL IS INSTALLED BEYOND 2' FROM THE EDGE OF PAVEMENT, THE RAIL HEIGHT IS MEASURED FROM THE GROUND DIRECTLY BELOW THE RAIL.
6. RAIL HEIGHT CONSTRUCTION TOLERANCE IS +/- 1 INCH.

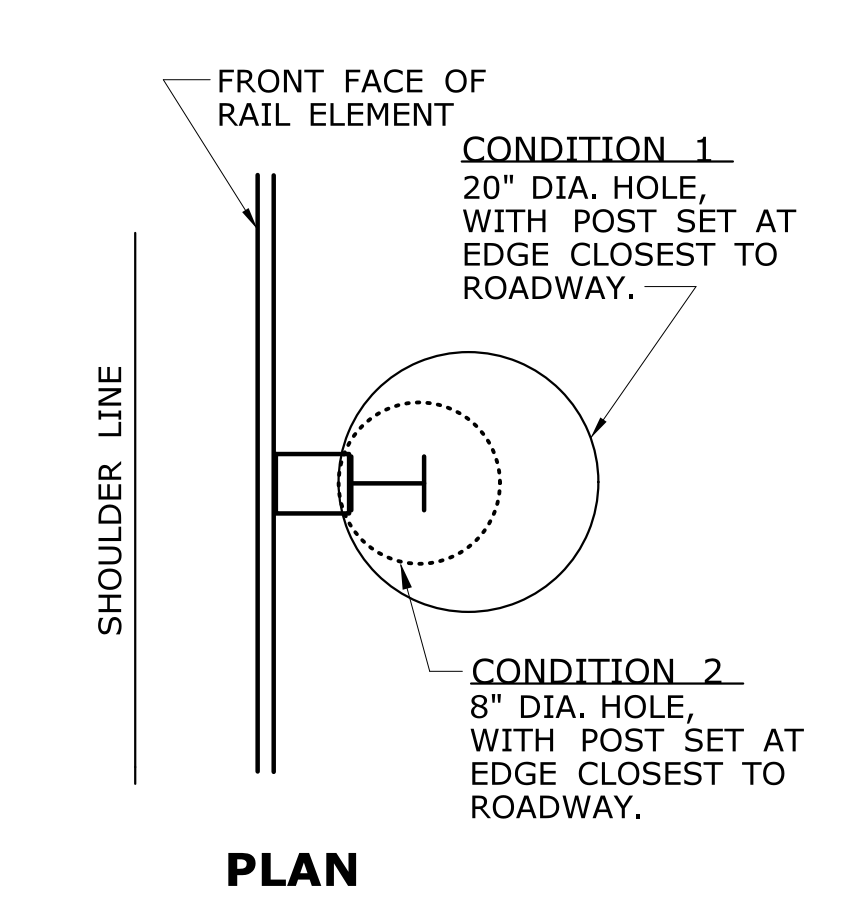


CONDITION 1 :
 IF SOIL DEPTH IS \leq 18" DEEP (A)
 DRILL 20" DIA. HOLE 24" INTO LEDGE. (B)

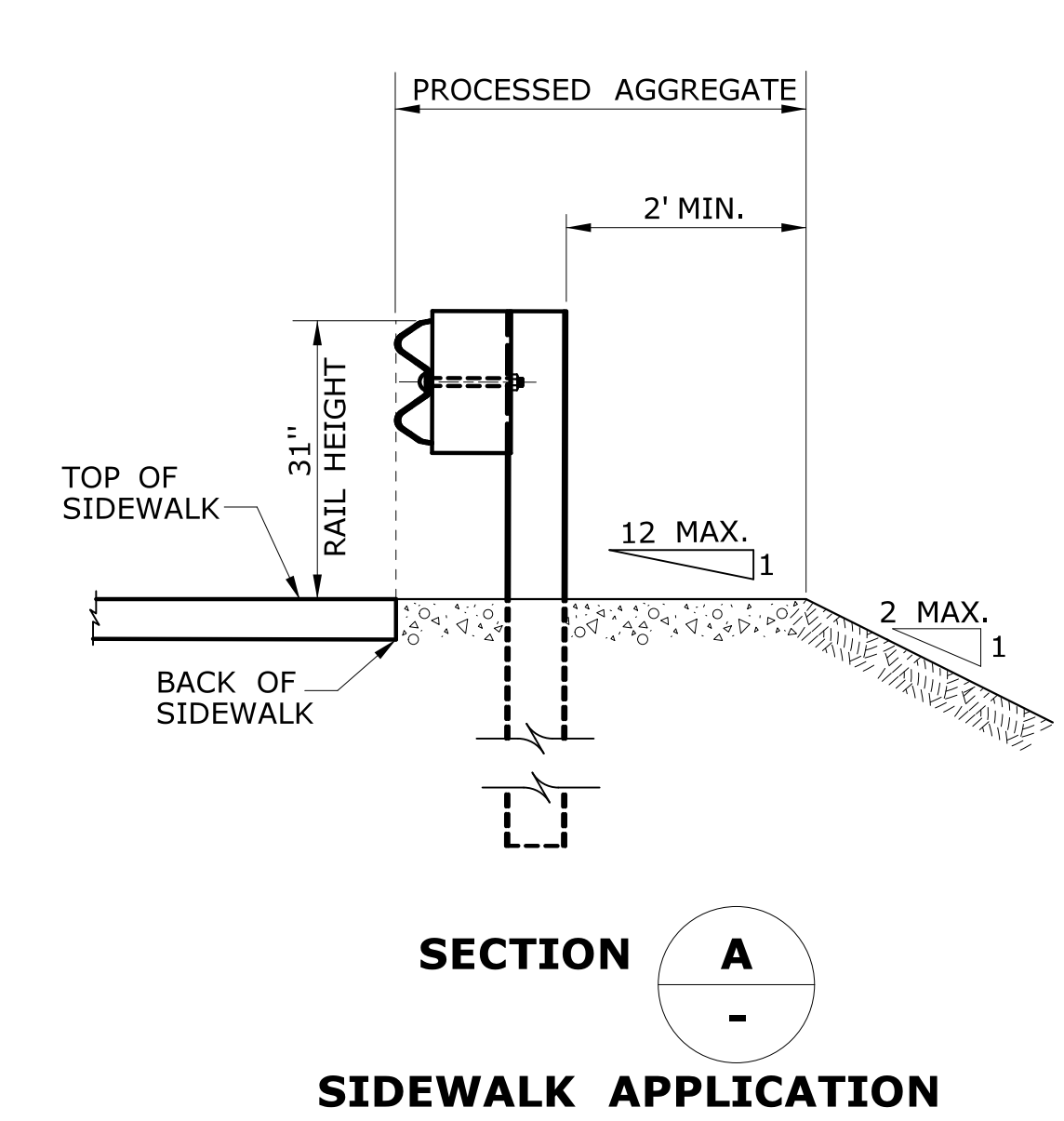
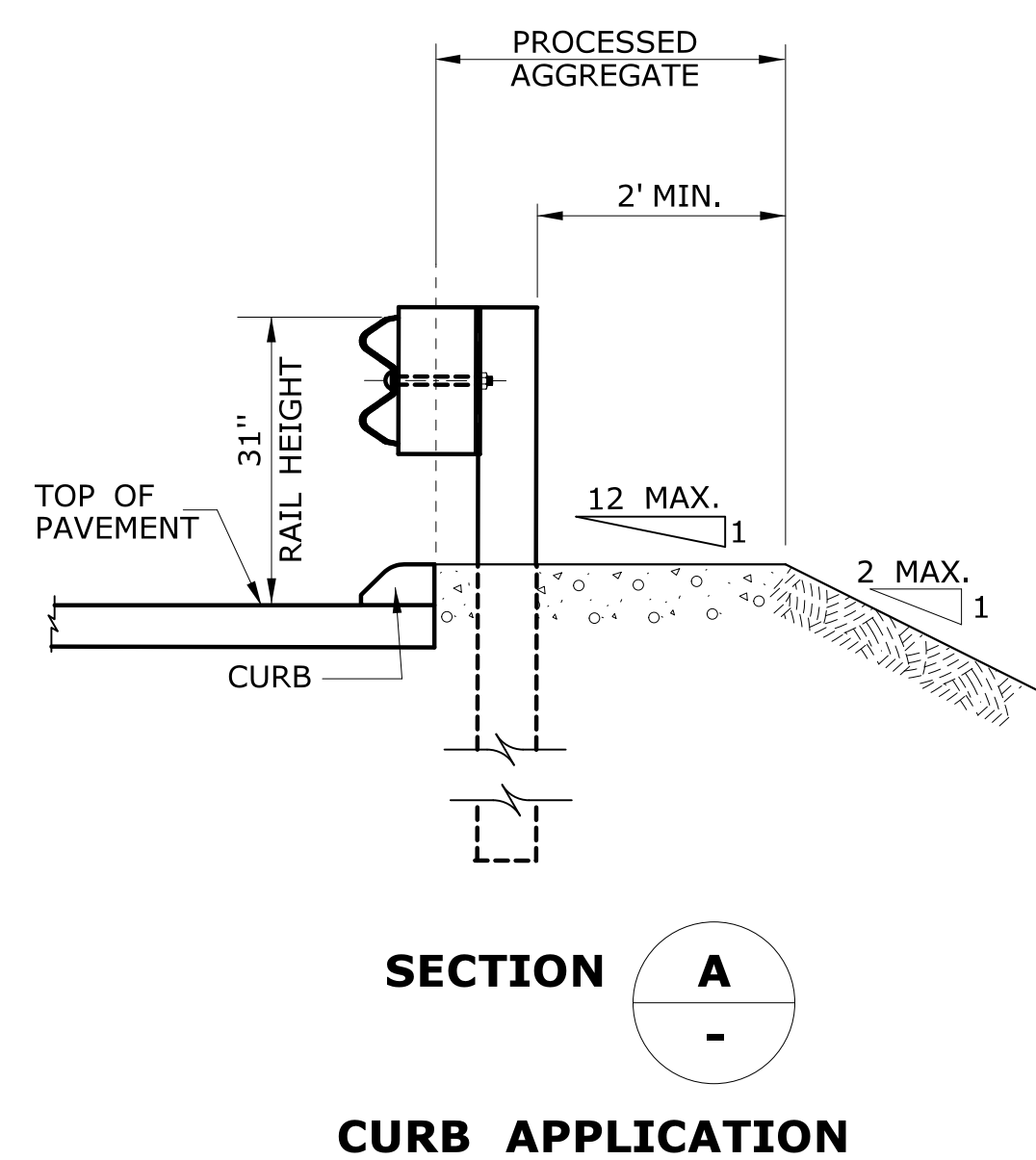
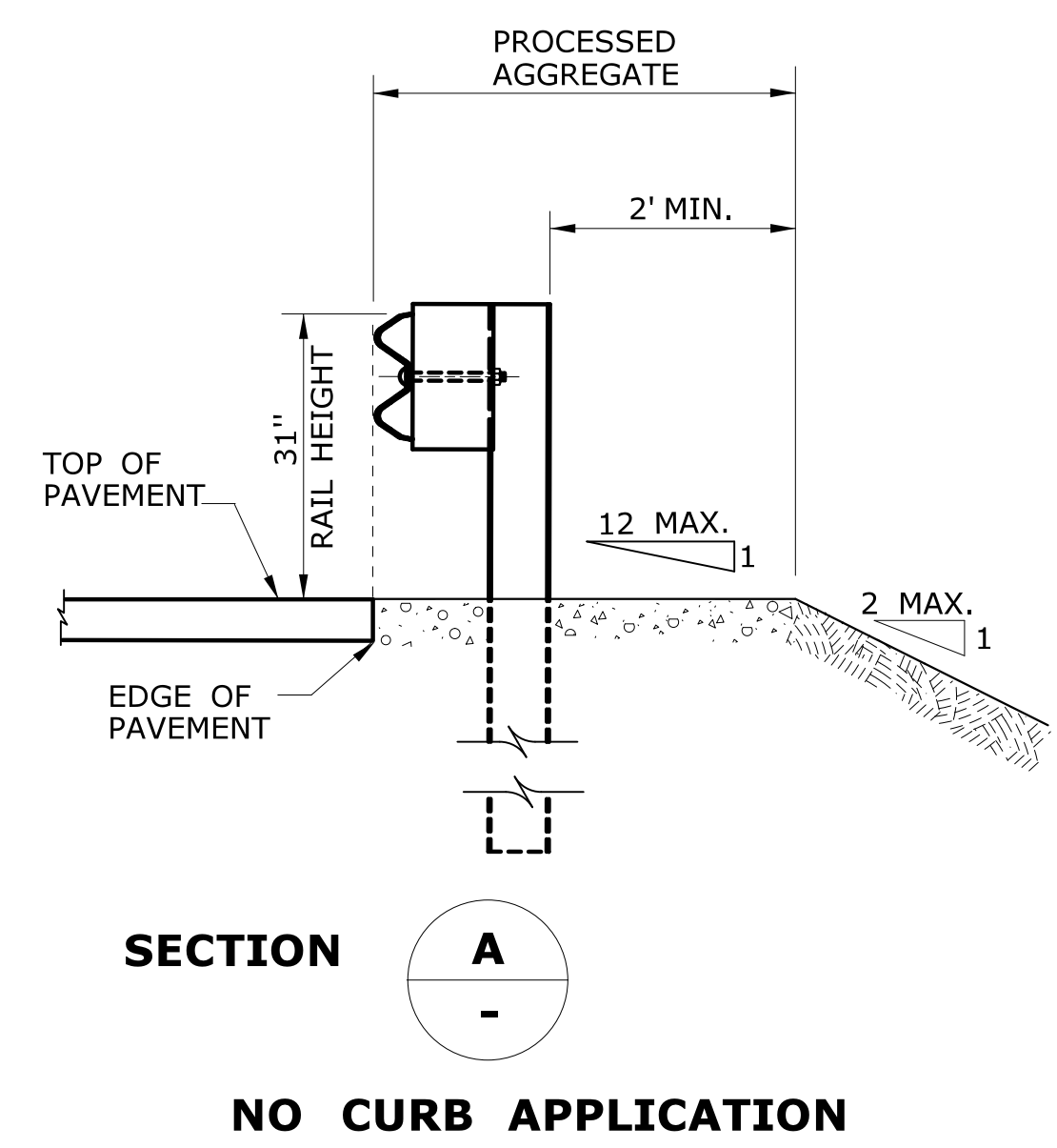
CONDITION 2 :
 IF SOIL DEPTH IS $>$ 18" DEEP (A)
 DRILL 8" DIA. HOLE 12" INTO LEDGE (B) OR TO THE DEPTH OF FULL EMBEDMENT WHICHEVER IS LESS.



LAP W-BEAM RAIL SECTIONS
 NOTE: EIGHT (8) SPLICE BOLTS PER JOINT



GUIDERAIL POSTS IN ROCK



1	1/19	ELIMINATED 1 FOOT RAIL OFFSET FOR NON CURB CONDITIONS
-	-	-
-	-	-
-	-	-
-	-	-
-	-	-
-	-	-
REV.	DATE	REVISION DESCRIPTION

NOT TO SCALE

STATE OF CONNECTICUT
 DEPARTMENT OF TRANSPORTATION

SUBMITTED BY: _____ NAME/DATE/TIME: _____

APPROVED BY: _____ NAME/DATE/TIME: _____

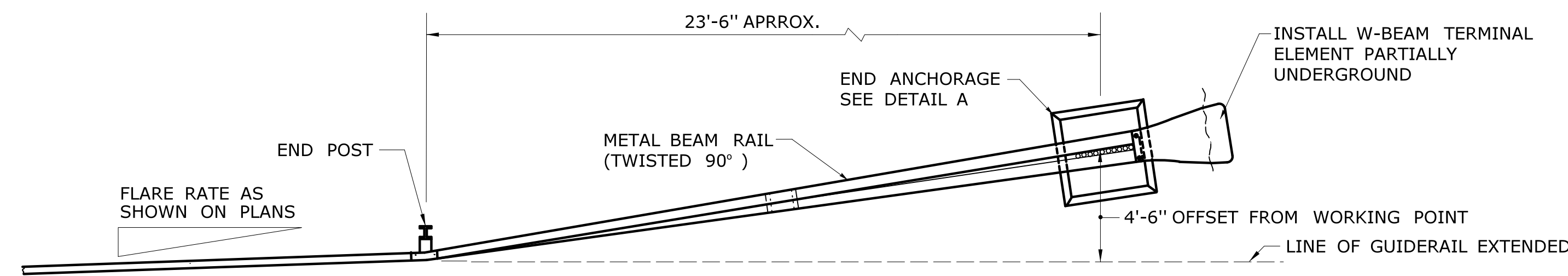
CTDOT
 STANDARD SHEET
 OFFICE OF ENGINEERING

STANDARD SHEET TITLE:
METAL BEAM RAIL (R-B MASH) GUIDERAIL

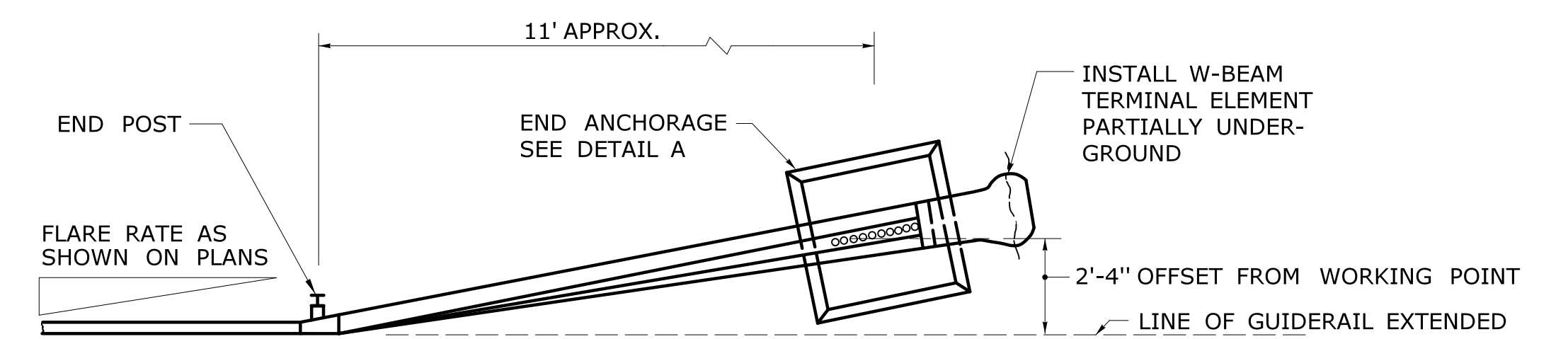
STANDARD SHEET NO.:
HW-910_21
 C3.8

GENERAL NOTES:

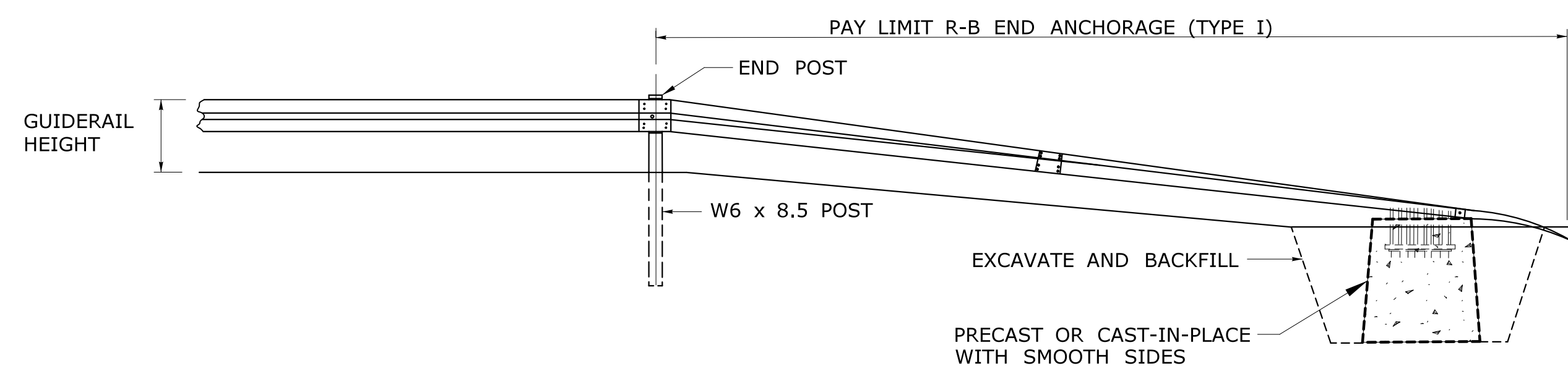
1. J-HOOK BOLTS MAY BE SUBSTITUTED FOR BOTTOM PLATE ANCHORAGE IN CONCRETE END ANCHORS USING THE SAME SIZE, STRENGTH, AND LENGTH AS NOTED ON THE PLANS.
2. INSTALLATION OF RADII DIFFERENT THAN WHAT IS SHOWN IN DETAIL "C" FOR R-B END ANCHORAGE TYPE II MUST BE APPROVED BY THE ENGINEER.



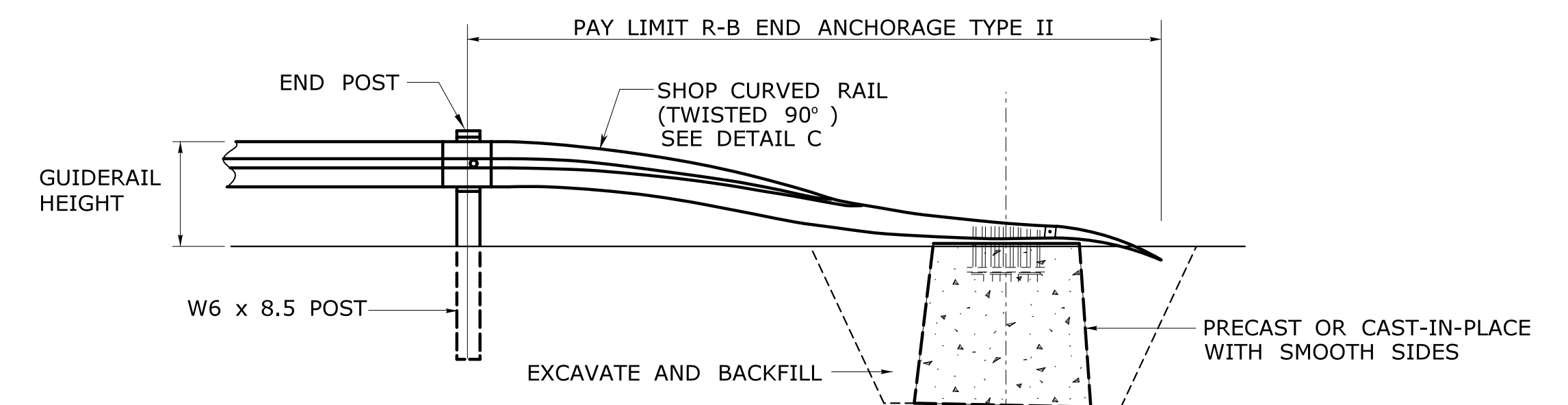
PLAN



PLAN



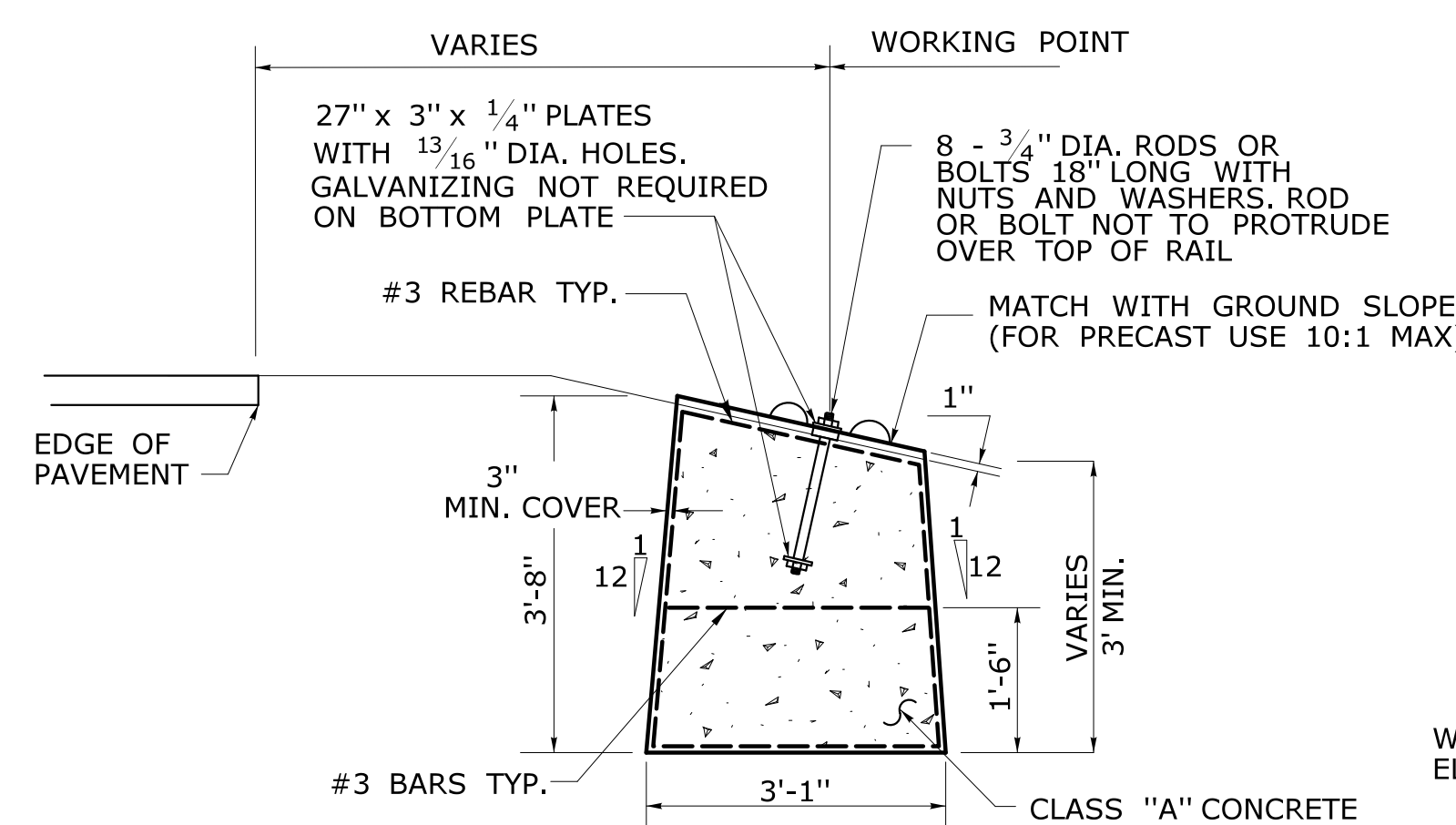
ELEVATION



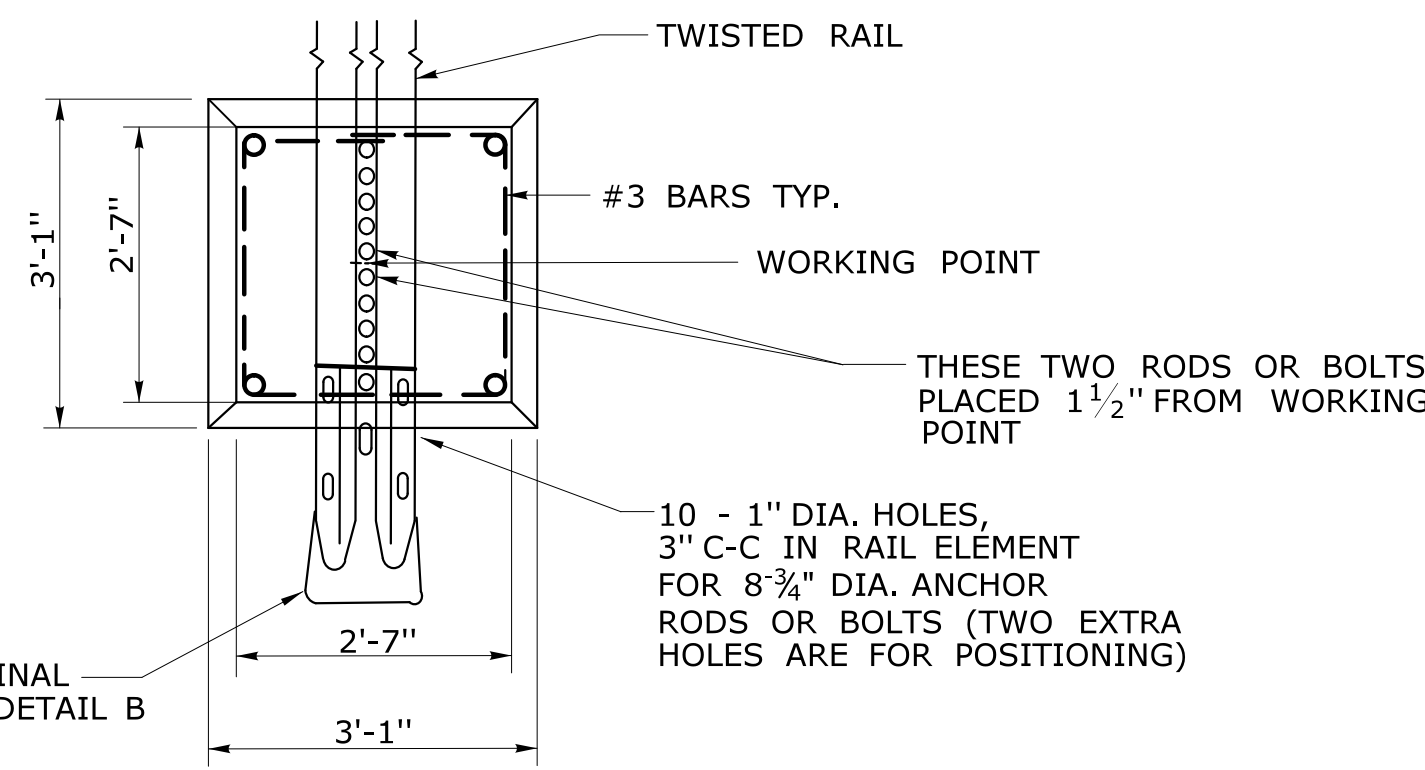
ELEVATION

R-B END ANCHORAGE TYPE I

R-B END ANCHORAGE TYPE II



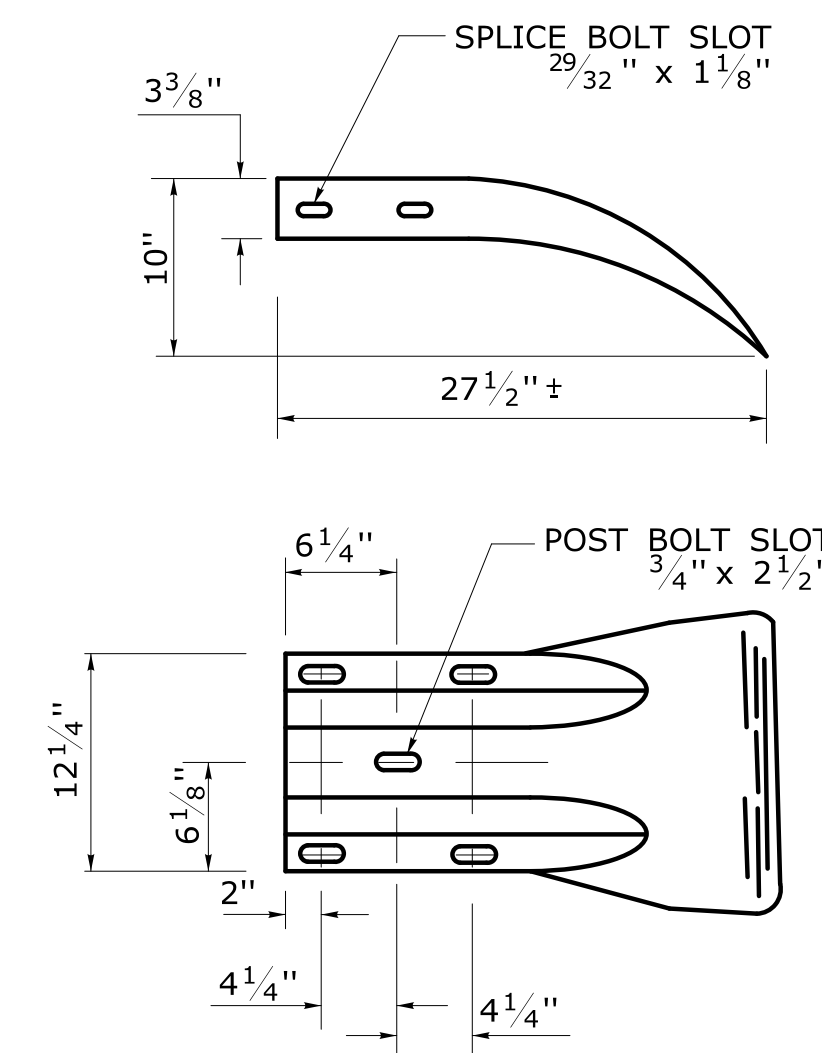
ELEVATION



PLAN

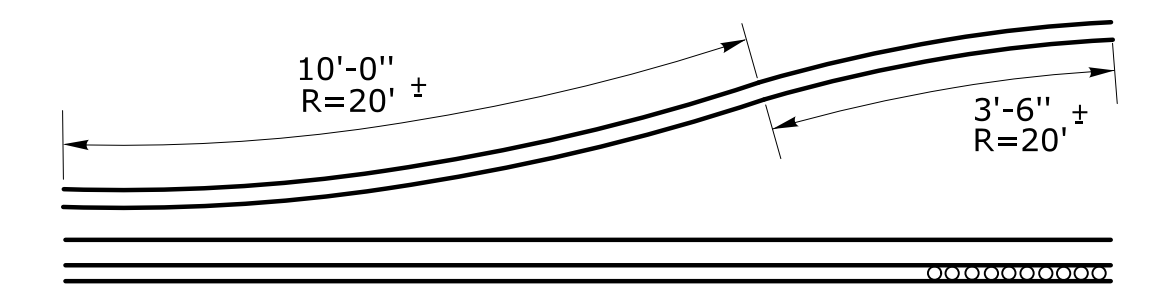
**DETAIL A
ROADSIDE CONCRETE END ANCHOR**

SEE NOTE 2



DETAIL B

W-BEAM TERMINAL ELEMENT



**DETAIL C
SHOP CURVED RAIL**
SEE NOTE 3

REV.	DATE	REVISION DESCRIPTION
1	6/11	REVISED TYPE I AND II ANCHOR FOR CLEAR ZONE PLACEMENT
2	7/13	ADD POST OFFSET DISTANCE
3	9/17	REVISED TYPE I AND II FOR R-B MASH OR R-B 350 RAIL
4	1/19	REMOVED GENERAL NOTE 1

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.

Plotted Date: 1/23/2019

NOT TO SCALE



Filename: CTDOT-HIGHWAY-STD_[1-23-19].dgn Model: 282 - HW-911.01

SUBMITTED BY:	NAME/DATE/TIME:
APPROVED BY:	NAME/DATE/TIME:

**CTDOT
STANDARD SHEET
OFFICE OF ENGINEERING**

STANDARD SHEET TITLE:	STANDARD SHEET NO.:
R-B END ANCHORAGE TYPE I AND II	HW-911_01
	C3.9