

NOTICE OF INTENT

ACTON BOXBOROUGH REGIONAL HIGH SCHOOL

LOWER FIELDS RENOVATIONS PROJECT

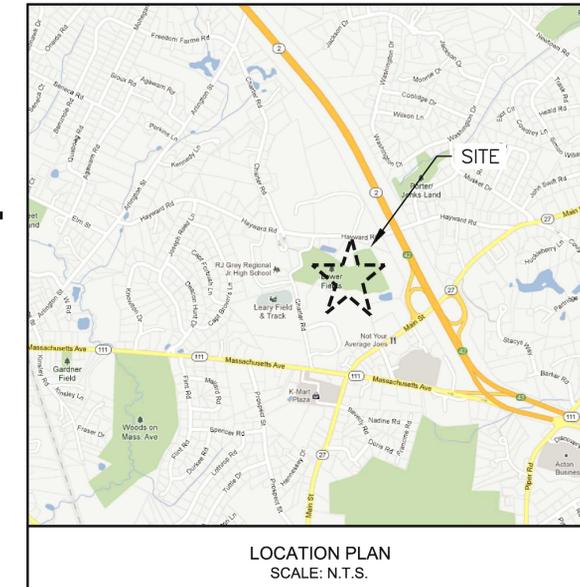
ACTON, MA

PREPARED FOR:

ACTON BOXBOROUGH REGIONAL SCHOOL DISTRICT
 16 CHARTER ROAD
 ACTON, MA 01720

ENGINEER:

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DRAWING NUMBER	DRAWING DESCRIPTION
CIVIL	
G001	COVER SHEET
C001	EXISTING CONDITIONS
C002	DEMOLITION AND EROSION CONTROL PLAN
C101	LAYOUT AND MATERIALS PLAN
C102	GRADING PLAN
C103	DRAINAGE PLAN
C104	UTILITY PLAN
C501	DETAIL SHEET 1 OF 6
C502	DETAIL SHEET 2 OF 6
C503	DETAIL SHEET 3 OF 6
C504	DETAIL SHEET 4 OF 6
C505	DETAIL SHEET 5 OF 6
C506	DETAIL SHEET 6 OF 6

PROJECT
 ACTON BOXBOROUGH REGIONAL HIGH SCHOOL
 LOWER FIELDS RENOVATIONS PROJECT
 36 CHARTER ROAD
 ACTON, MA

OWNER
 ACTON BOXBOROUGH REGIONAL SCHOOL DISTRICT
 16 CHARTER ROAD
 ACTON, MA

REVISIONS		
NO.	DATE	DESCRIPTION
1	4/30/12	CONCOM COMMENTS

CADD FILE	715260_G001
DESIGNED BY	PS
DRAWN BY	WAH/BTC
CHECKED BY	WJS/JMP
DATE	4-5-12
DRAWING SCALE	N.T.S.

GRAPHIC SCALE

SHEET TITLE

COVER SHEET

DRAWING NO.	G001
PROJECT NO.	715260

N.O.I. SET

EROSION CONTROL NOTES:

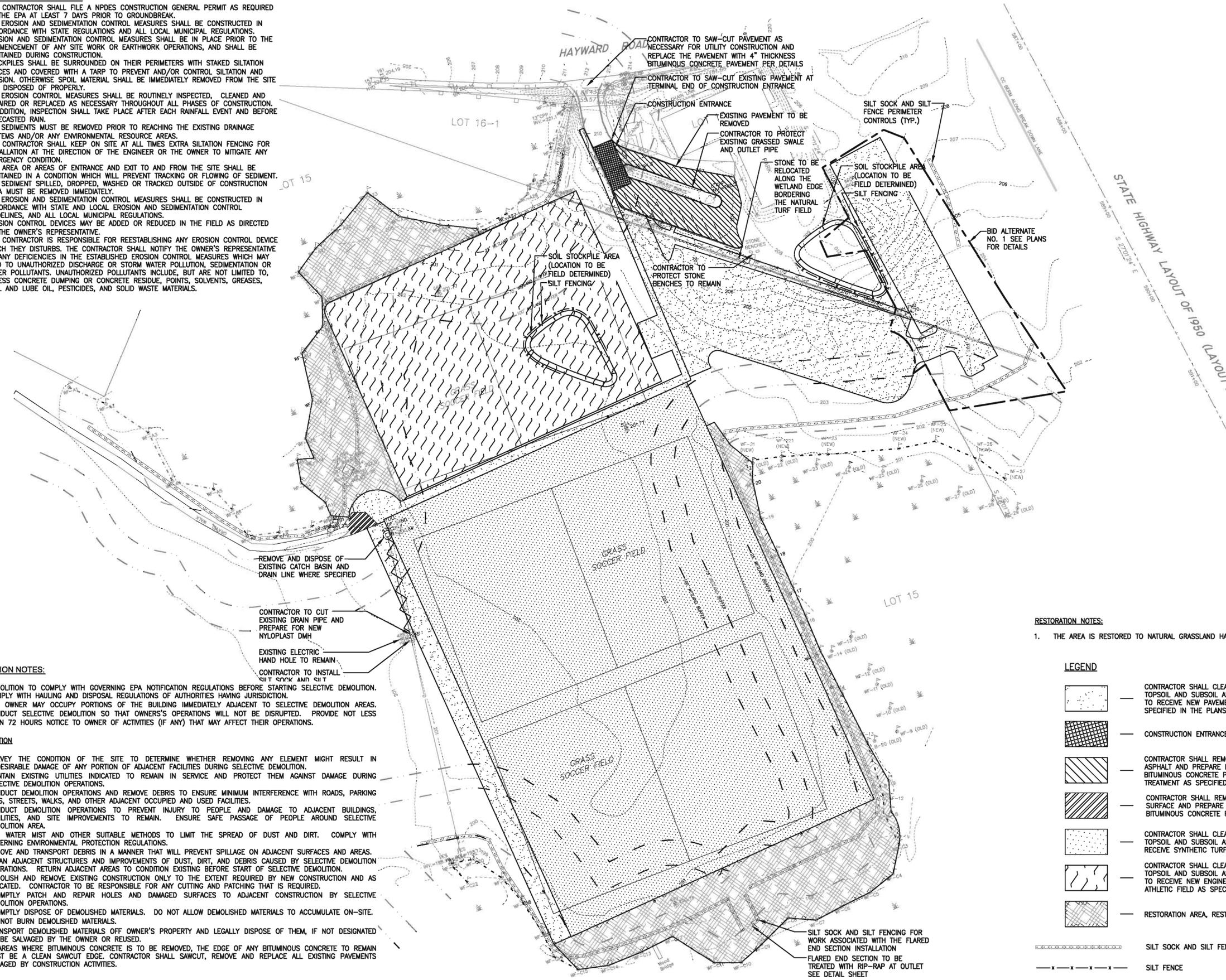
1. THE CONTRACTOR SHALL FILE A NPDES CONSTRUCTION GENERAL PERMIT AS REQUIRED BY THE EPA AT LEAST 7 DAYS PRIOR TO GROUND BREAK.
2. ALL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE CONSTRUCTED IN ACCORDANCE WITH STATE REGULATIONS AND ALL LOCAL MUNICIPAL REGULATIONS.
3. EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE IN PLACE PRIOR TO THE COMMENCEMENT OF ANY SITE WORK OR EARTHWORK OPERATIONS, AND SHALL BE MAINTAINED DURING CONSTRUCTION.
4. STOCKPILES SHALL BE SURROUNDED ON THEIR PERIMETERS WITH STAKED SILTATION FENCES AND COVERED WITH A TARP TO PREVENT AND/OR CONTROL SILTATION AND EROSION. OTHERWISE SPOIL MATERIAL SHALL BE IMMEDIATELY REMOVED FROM THE SITE AND DISPOSED OF PROPERLY.
5. ALL EROSION CONTROL MEASURES SHALL BE ROUTINELY INSPECTED, CLEANED AND REPAIRED OR REPLACED AS NECESSARY THROUGHOUT ALL PHASES OF CONSTRUCTION. IN ADDITION, INSPECTION SHALL TAKE PLACE AFTER EACH RAINFALL EVENT AND BEFORE FORECASTED RAIN.
6. ALL SEDIMENTS MUST BE REMOVED PRIOR TO REACHING THE EXISTING DRAINAGE SYSTEMS AND/OR ANY ENVIRONMENTAL RESOURCE AREAS.
7. THE CONTRACTOR SHALL KEEP ON SITE AT ALL TIMES EXTRA SILTATION FENCING FOR INSTALLATION AT THE DIRECTION OF THE ENGINEER OR THE OWNER TO MITIGATE ANY EMERGENCY CONDITION.
8. THE AREA OR AREAS OF ENTRANCE AND EXIT TO AND FROM THE SITE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED OUTSIDE OF CONSTRUCTION AREA MUST BE REMOVED IMMEDIATELY.
9. ALL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE CONSTRUCTED IN ACCORDANCE WITH STATE AND LOCAL EROSION AND SEDIMENTATION CONTROL GUIDELINES, AND ALL LOCAL MUNICIPAL REGULATIONS.
10. EROSION CONTROL DEVICES MAY BE ADDED OR REDUCED IN THE FIELD AS DIRECTED BY THE OWNER'S REPRESENTATIVE.
11. THE CONTRACTOR IS RESPONSIBLE FOR REESTABLISHING ANY EROSION CONTROL DEVICE WHICH THEY DISTURBS. THE CONTRACTOR SHALL NOTIFY THE OWNER'S REPRESENTATIVE OF ANY DEFICIENCIES IN THE ESTABLISHED EROSION CONTROL MEASURES WHICH MAY LEAD TO UNAUTHORIZED DISCHARGE OR STORM WATER POLLUTION, SEDIMENTATION OR OTHER POLLUTANTS. UNAUTHORIZED POLLUTANTS INCLUDE, BUT ARE NOT LIMITED TO, EXCESS CONCRETE DUMPING OR CONCRETE RESIDUE, POINTS, SOLVENTS, GREASES, FUEL AND LUBE OIL, PESTICIDES, AND SOLID WASTE MATERIALS.

DEMOLITION NOTES:

1. DEMOLITION TO COMPLY WITH GOVERNING EPA NOTIFICATION REGULATIONS BEFORE STARTING SELECTIVE DEMOLITION. COMPLY WITH HAULING AND DISPOSAL REGULATIONS OF AUTHORITIES HAVING JURISDICTION.
2. THE OWNER MAY OCCUPY PORTIONS OF THE BUILDING IMMEDIATELY ADJACENT TO SELECTIVE DEMOLITION AREAS. CONDUCT SELECTIVE DEMOLITION SO THAT OWNERS'S OPERATIONS WILL NOT BE DISRUPTED. PROVIDE NOT LESS THAN 72 HOURS NOTICE TO OWNER OF ACTIVITIES (IF ANY) THAT MAY AFFECT THEIR OPERATIONS.

EXECUTION

1. SURVEY THE CONDITION OF THE SITE TO DETERMINE WHETHER REMOVING ANY ELEMENT MIGHT RESULT IN UNDESIRABLE DAMAGE OF ANY PORTION OF ADJACENT FACILITIES DURING SELECTIVE DEMOLITION.
2. MAINTAIN EXISTING UTILITIES INDICATED TO REMAIN IN SERVICE AND PROTECT THEM AGAINST DAMAGE DURING SELECTIVE DEMOLITION OPERATIONS.
3. CONDUCT DEMOLITION OPERATIONS AND REMOVE DEBRIS TO ENSURE MINIMUM INTERFERENCE WITH ROADS, PARKING LOTS, STREETS, WALKS, AND OTHER ADJACENT OCCUPIED AND USED FACILITIES.
4. CONDUCT DEMOLITION OPERATIONS TO PREVENT INJURY TO PEOPLE AND DAMAGE TO ADJACENT BUILDINGS, FACILITIES, AND SITE IMPROVEMENTS TO REMAIN. ENSURE SAFE PASSAGE OF PEOPLE AROUND SELECTIVE DEMOLITION AREA.
5. USE WATER MIST AND OTHER SUITABLE METHODS TO LIMIT THE SPREAD OF DUST AND DIRT. COMPLY WITH GOVERNING ENVIRONMENTAL PROTECTION REGULATIONS.
6. REMOVE AND TRANSPORT DEBRIS IN A MANNER THAT WILL PREVENT SPILLAGE ON ADJACENT SURFACES AND AREAS.
7. CLEAN ADJACENT STRUCTURES AND IMPROVEMENTS OF DUST, DIRT, AND DEBRIS CAUSED BY SELECTIVE DEMOLITION OPERATIONS. RETURN ADJACENT AREAS TO CONDITION EXISTING BEFORE START OF SELECTIVE DEMOLITION.
8. DEMOLISH AND REMOVE EXISTING CONSTRUCTION ONLY TO THE EXTENT REQUIRED BY NEW CONSTRUCTION AND AS INDICATED. CONTRACTOR TO BE RESPONSIBLE FOR ANY CUTTING AND PATCHING THAT IS REQUIRED.
9. PROMPTLY PATCH AND REPAIR HOLES AND DAMAGED SURFACES TO ADJACENT CONSTRUCTION BY SELECTIVE DEMOLITION OPERATIONS.
10. PROMPTLY DISPOSE OF DEMOLISHED MATERIALS. DO NOT ALLOW DEMOLISHED MATERIALS TO ACCUMULATE ON-SITE.
11. DO NOT BURN DEMOLISHED MATERIALS.
12. TRANSPORT DEMOLISHED MATERIALS OFF OWNER'S PROPERTY AND LEGALLY DISPOSE OF THEM, IF NOT DESIGNATED TO BE SALVAGED BY THE OWNER OR REUSED.
13. IN AREAS WHERE BITUMINOUS CONCRETE IS TO BE REMOVED, THE EDGE OF ANY BITUMINOUS CONCRETE TO REMAIN MUST BE A CLEAN SAWCUT EDGE. CONTRACTOR SHALL SAWCUT, REMOVE AND REPLACE ALL EXISTING PAVEMENTS DAMAGED BY CONSTRUCTION ACTIVITIES.



RESTORATION NOTES:

1. THE AREA IS RESTORED TO NATURAL GRASSLAND HABITAT.

LEGEND

- CONTRACTOR SHALL CLEAR AND GRUB AND STRIP ALL TOPSOIL AND SUBSOIL AS REQUIRED AND PREPARE BASE TO RECEIVE NEW PAVEMENT SURFACE TREATMENT AS SPECIFIED IN THE PLANS
- CONSTRUCTION ENTRANCE
- CONTRACTOR SHALL REMOVE AND DISPOSE OF EXISTING ASPHALT AND PREPARE BASE TO RECEIVE NEW BITUMINOUS CONCRETE PAVEMENT OR SURFACE TREATMENT AS SPECIFIED IN THE PLANS
- CONTRACTOR SHALL REMOVE EXISTING GRAVEL STONEDUST SURFACE AND PREPARE BASE TO RECEIVE NEW BITUMINOUS CONCRETE PAVEMENT
- CONTRACTOR SHALL CLEAR AND GRUB AND STRIP ALL TOPSOIL AND SUBSOIL AS REQUIRED AND PREPARE BASE TO RECEIVE SYNTHETIC TURF FIELD AS SPECIFIED IN THE PLANS
- CONTRACTOR SHALL CLEAR AND GRUB AND STRIP ALL TOPSOIL AND SUBSOIL AS REQUIRED AND PREPARE BASE TO RECEIVE NEW ENGINEERED ROOT ZONE NATURAL TURF ATHLETIC FIELD AS SPECIFIED IN THE PLANS
- RESTORATION AREA, RESTORED NATIVE GRASSLAND HABITAT
- SILT SOCK AND SILT FENCE
- SILT FENCE
- EXISTING DRAIN LINE TO BE REMOVED
- EXISTING STRUCTURES TO BE REMOVED

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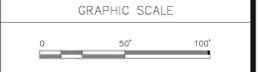
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36 CHARTER ROAD
ACTON, MA

OWNER
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16 CHARTER ROAD
ACTON, MA

REVISIONS		
NO.	DATE	DESCRIPTION
1	4/30/12	CONCOM COMMENTS

CADD FILE	715260_C002
DESIGNED BY	PS/BTC
DRAWN BY	BTC
CHECKED BY	WUS/JMP
DATE	4-5-12
DRAWING SCALE	1"=50'-0"



SHEET TITLE

DEMOLITION AND EROSION CONTROL PLAN

DRAWING NO.	C002
PROJECT NO.	715260



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DESIGNED BY	PS
DRAWN BY	WAH/BTC
CHECKED BY	WJS/JMP
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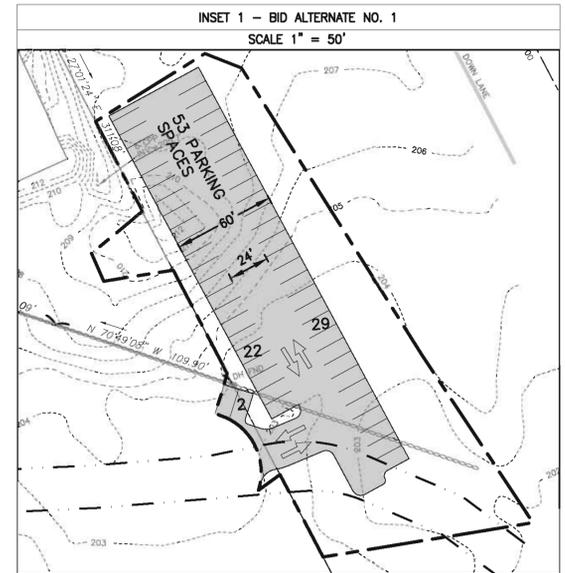
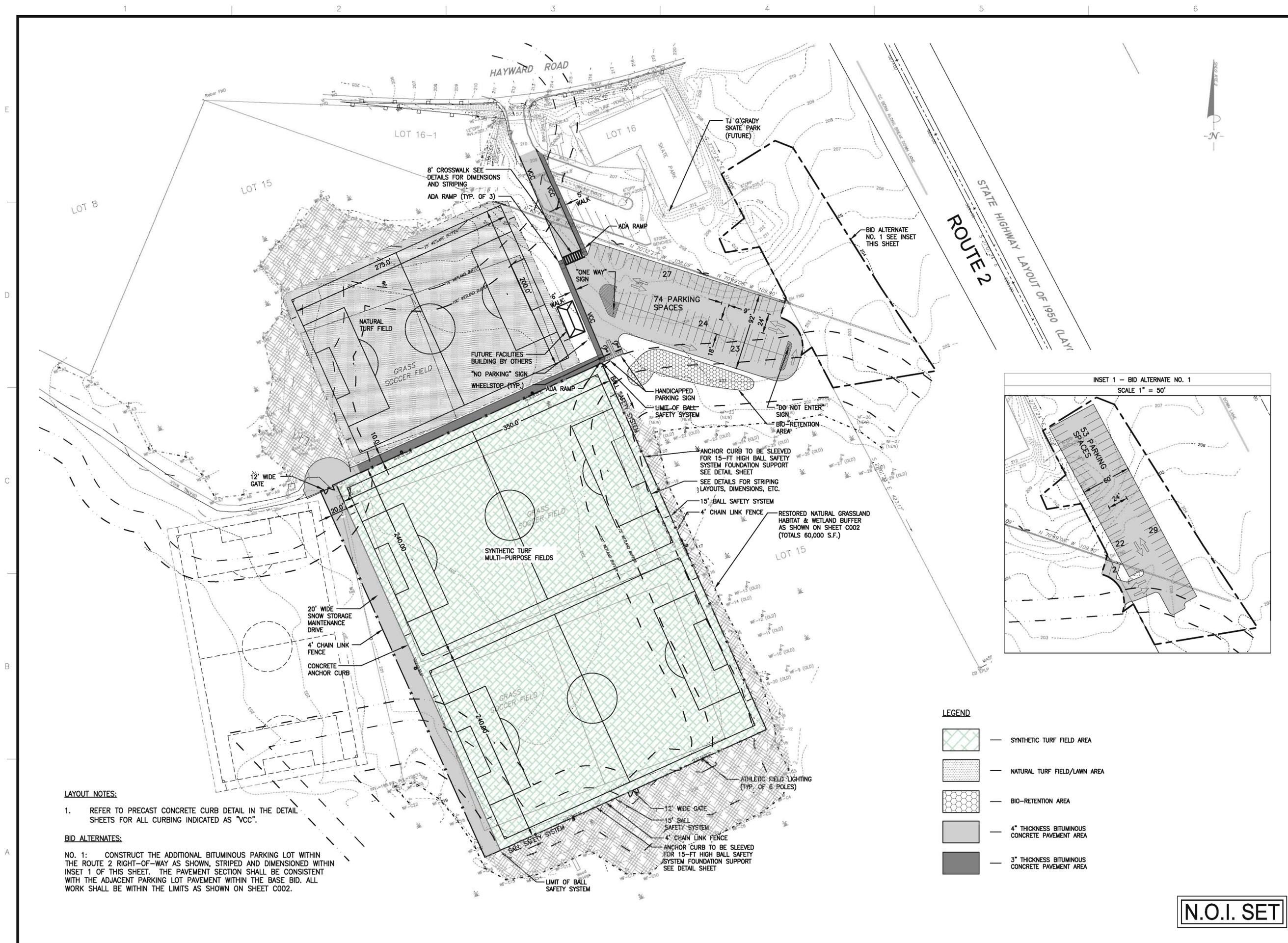
SHEET TITLE

PROPOSED LAYOUT PLAN

DRAWING NO.

C101

PROJECT NO. 715260



LEGEND

	— SYNTHETIC TURF FIELD AREA
	— NATURAL TURF FIELD/LAWN AREA
	— BIO-RETENTION AREA
	— 4" THICKNESS BITUMINOUS CONCRETE PAVEMENT AREA
	— 3" THICKNESS BITUMINOUS CONCRETE PAVEMENT AREA

LAYOUT NOTES:

- REFER TO PRECAST CONCRETE CURB DETAIL IN THE DETAIL SHEETS FOR ALL CURBING INDICATED AS "VCC".

BID ALTERNATES:

NO. 1: CONSTRUCT THE ADDITIONAL BITUMINOUS PARKING LOT WITHIN THE ROUTE 2 RIGHT-OF-WAY AS SHOWN, STRIPED AND DIMENSIONED WITHIN INSET 1 OF THIS SHEET. THE PAVEMENT SECTION SHALL BE CONSISTENT WITH THE ADJACENT PARKING LOT PAVEMENT WITHIN THE BASE BID. ALL WORK SHALL BE WITHIN THE LIMITS AS SHOWN ON SHEET C002.

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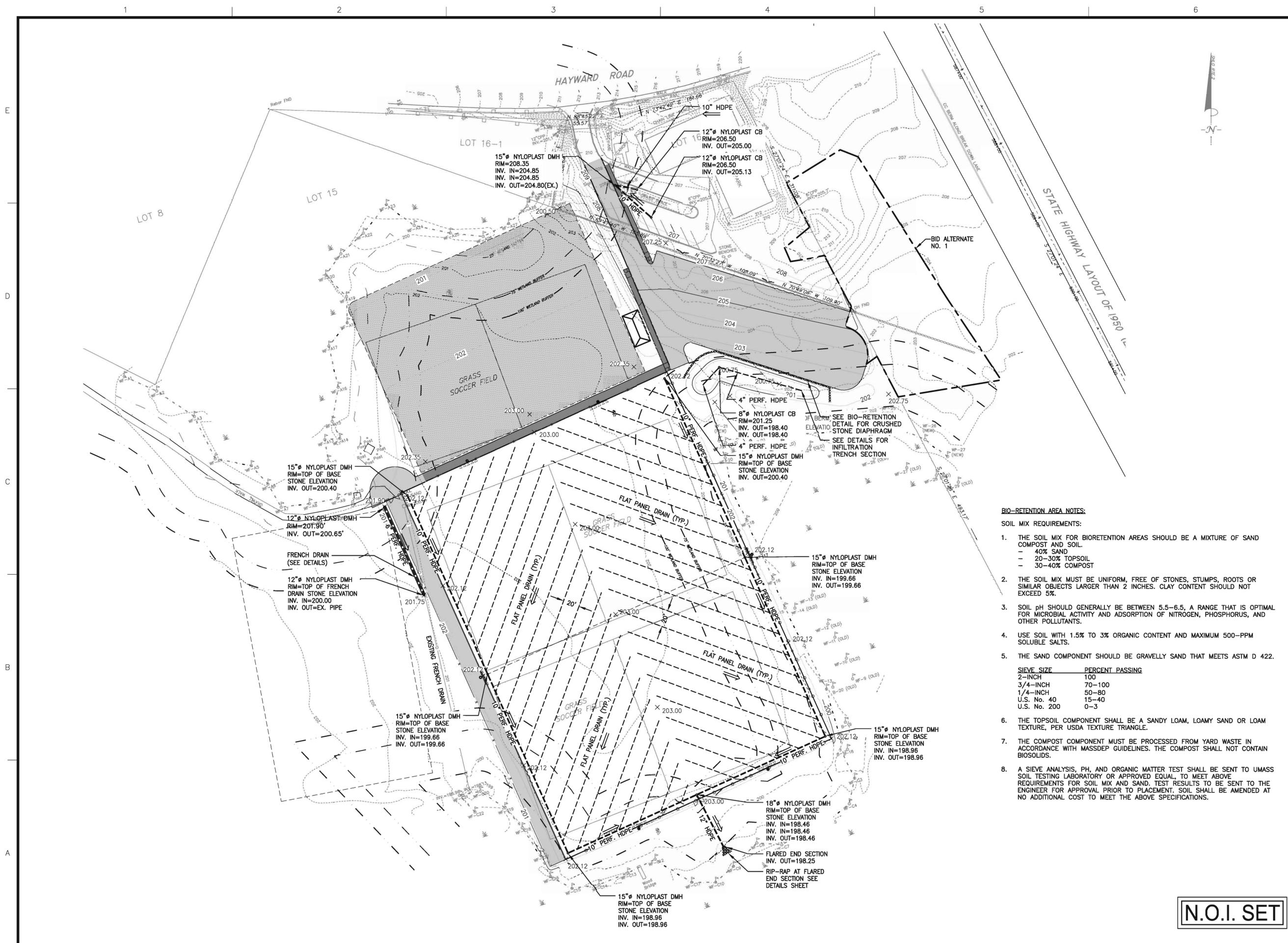
REVISIONS		
NO.	DATE	DESCRIPTION
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CADD FILE	715260_C103
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GRAPHIC SCALE
0 50' 100'

SHEET TITLE
DRAINAGE PLAN

DRAWING NO.	C103
PROJECT NO.	715260



- BIO-RETENTION AREA NOTES:**
- SOIL MIX REQUIREMENTS:**
- THE SOIL MIX FOR BIORETENTION AREAS SHOULD BE A MIXTURE OF SAND COMPOST AND SOIL.
 - 40% SAND
 - 20-30% TOPSOIL
 - 30-40% COMPOST
 - THE SOIL MIX MUST BE UNIFORM, FREE OF STONES, STUMPS, ROOTS OR SIMILAR OBJECTS LARGER THAN 2 INCHES. CLAY CONTENT SHOULD NOT EXCEED 5%.
 - SOIL pH SHOULD GENERALLY BE BETWEEN 5.5-6.5, A RANGE THAT IS OPTIMAL FOR MICROBIAL ACTIVITY AND ADSORPTION OF NITROGEN, PHOSPHORUS, AND OTHER POLLUTANTS.
 - USE SOIL WITH 1.5% TO 3% ORGANIC CONTENT AND MAXIMUM 500-PPM SOLUBLE SALTS.
 - THE SAND COMPONENT SHOULD BE GRAVELLY SAND THAT MEETS ASTM D 422.
- | SIEVE SIZE | PERCENT PASSING |
|--------------|-----------------|
| 2-INCH | 100 |
| 3/4-INCH | 70-100 |
| 1/4-INCH | 50-80 |
| U.S. No. 40 | 15-40 |
| U.S. No. 200 | 0-3 |
- THE TOPSOIL COMPONENT SHALL BE A SANDY LOAM, LOAMY SAND OR LOAM TEXTURE, PER USDA TEXTURE TRIANGLE.
 - THE COMPOST COMPONENT MUST BE PROCESSED FROM YARD WASTE IN ACCORDANCE WITH MASSDEP GUIDELINES. THE COMPOST SHALL NOT CONTAIN BIOSOLIDS.
 - A SIEVE ANALYSIS, PH, AND ORGANIC MATTER TEST SHALL BE SENT TO UMASS SOIL TESTING LABORATORY OR APPROVED EQUAL, TO MEET ABOVE REQUIREMENTS FOR SOIL MIX AND SAND. TEST RESULTS TO BE SENT TO THE ENGINEER FOR APPROVAL PRIOR TO PLACEMENT. SOIL SHALL BE AMENDED AT NO ADDITIONAL COST TO MEET THE ABOVE SPECIFICATIONS.

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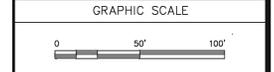
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DRAWING SCALE	1"=50'-0"



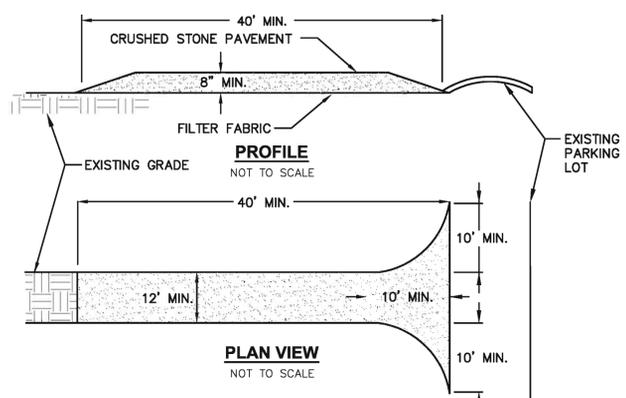
SHEET TITLE

UTILITY PLAN

DRAWING NO.	C104
PROJECT NO.	715260

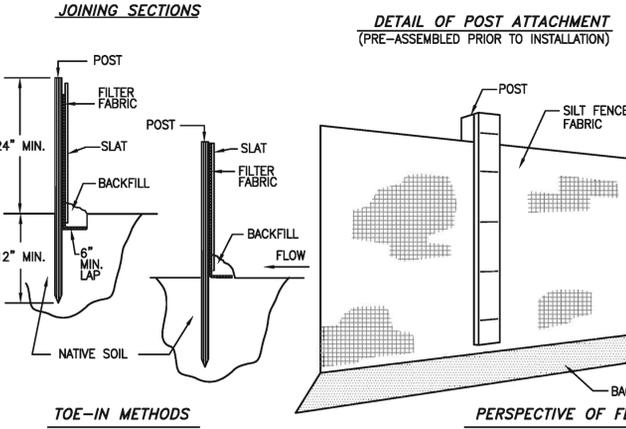
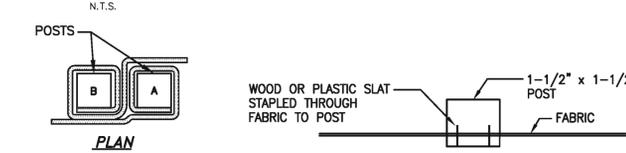
- UTILITY NOTES:**
- FORCE MAIN PVC PRESSURE PIPE AND FITTINGS SHALL CONFORM TO ASTM 2241 FOR 160 PSI PIPE (SDR 26).
 - ALL UTILITY STUBS SHALL BE BROUGHT TO GRADE AND CAPPED BY INSTALLING A VERTICAL FITTING AT PIPE END.
 - CONTRACTOR TO FIELD VERIFY LOCATION OF EXISTING UTILITIES AND COORDINATE WITH THE RESPECTIVE UTILITY COMPANIES AND THE TOWN PRIOR TO CONNECTION. CONTRACTOR SHALL PERFORM CONNECTION PER TOWN STANDARDS AND THE CONTRACTOR IS TO NOTIFY THE TOWN AND THE ENGINEER UPON DISCOVERY OF ANY DISCREPANCIES.

N.O.I. SET



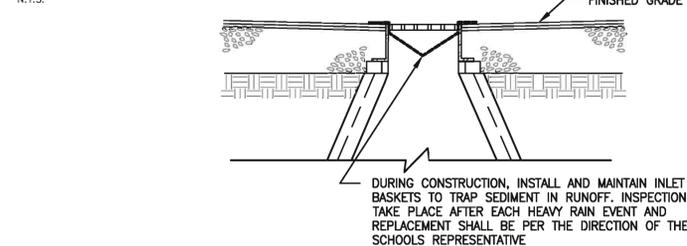
- NOTES:**
- STONE SIZE - USE 2" STONE, OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.
 - LENGTH - NOT LESS THAN 50 FEET.
 - THICKNESS - NOT LESS THAN (8) INCHES.
 - WIDTH - TWELVE (12) MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS. TWENTY-FOUR (24) FOOT IF SINGLE ENTRANCE TO SITE.
 - FILTER CLOTH - WILL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE.
 - SURFACE WATER - ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED ACROSS THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM WITH 5:1 SLOPES WILL BE PERMITTED.
 - MAINTENANCE - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.
 - WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.
 - PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED AFTER EACH RAIN.

STABILIZED CONSTRUCTION ENTRANCE



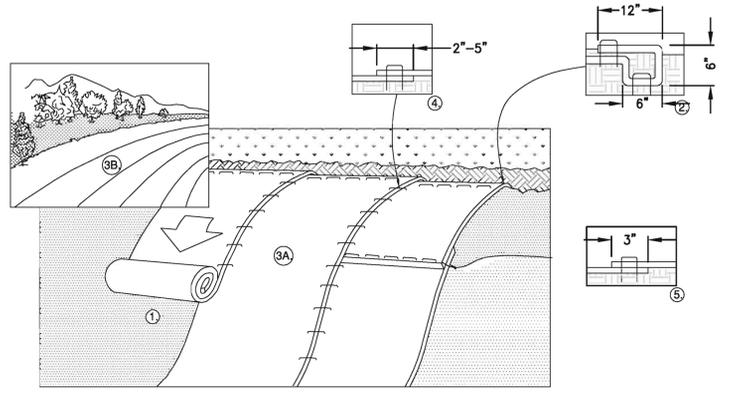
- NOTES:**
- EXCAVATE A 6"x6" TRENCH ALONG THE LINE OF EROSION CONTROL OF THE SITE.
 - UNROLL SILTATION FENCE AND POSITION THE POSTS AGAINST THE BACK (DOWNSTREAM) WALL OF THE TRENCH (NET SIDE AWAY FROM FLOW DIRECTION).
 - DRIVE THE POST INTO THE GROUND UNTIL THE NETTING IS LAYING ACROSS THE TRENCH BOTTOM.
 - LAY THE TOE-IN FLAP OF THE FABRIC ONTO THE UNDISTURBED BOTTOM OF THE TRENCH. BACKFILL THE TRENCH AND TAMP THE SOIL. TOE-IN CAN ALSO BE ACCOMPLISHED BY LAYING FABRIC FLAP ON UNDISTURBED GROUND AND PILING & TAMPING FILL AT THE BASE.

SILTATION FENCE DETAIL



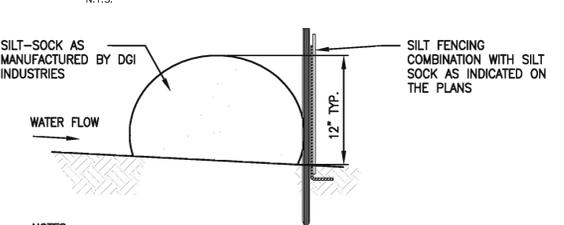
CATCH BASIN SEDIMENT CONTROL DETAIL

DURING CONSTRUCTION, INSTALL AND MAINTAIN INLET BASKETS TO TRAP SEDIMENT IN RUNOFF. INSPECTION SHALL TAKE PLACE AFTER EACH HEAVY RAIN EVENT AND REPLACEMENT SHALL BE PER THE DIRECTION OF THE SCHOOLS REPRESENTATIVE



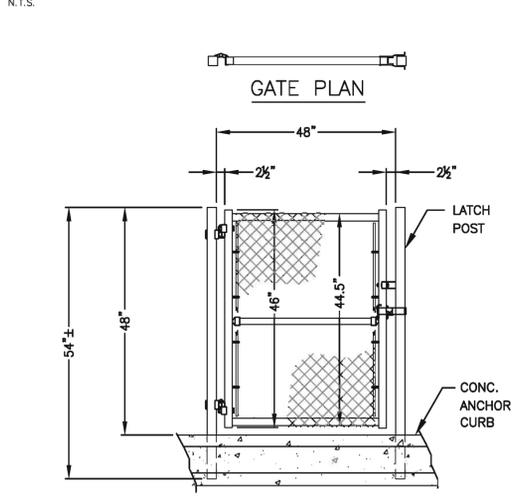
- PREPARE SOIL BEFORE INSTALLING BLANKETS, INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED. NOTE: WHEN USING CELL-O-SEED DO NOT SEED PREPARED AREA. CELL-O-SEED MUST BE INSTALLED WITH PAPER SIDE DOWN.
- BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE BLANKET IN A 6" (15cm) DEEP X 6" (15cm) WIDE TRENCH WITH APPROXIMATELY 12" (30cm) OF BLANKET EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE BLANKET WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" (30cm) APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" (30cm) PORTION OF BLANKET BACK OVER SEED AND COMPACTED SOIL. SECURE BLANKET OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" (30cm) APART ACROSS THE WIDTH OF THE BLANKET.
- ROLL THE BLANKETS (A.) DOWN OR (B.) HORIZONTALLY ACROSS THE SLOPE. BLANKETS WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL BLANKETS MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE. WHEN USING OPTIONAL DOT SYSTEM, STAPLES/STAKES SHOULD BE PLACED THROUGH EACH OF THE COLORED DOTS CORRESPONDING TO THE APPROPRIATE STAPLE PATTERN.
- THE EDGES OF PARALLEL BLANKETS MUST BE STAPLED WITH APPROXIMATELY 2"-5" (5cm-12.5cm) OVERLAP DEPENDING ON BLANKET TYPE. TO ENSURE PROPER SEAM ALIGNMENT, PLACE THE EDGE OF THE OVERLAPPING BLANKET (BLANKET BEING INSTALLED ON TOP) EVEN WITH THE COLORED SEAM STITCH ON THE PREVIOUSLY INSTALLED BLANKET.
- CONSECUTIVE BLANKETS SPICED DOWN THE SLOPE MUST BE PLACED END OVER END (SHINGLE STYLE) WITH AN APPROXIMATE 3" (7.5cm) OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" (30cm) APART ACROSS ENTIRE BLANKET WIDTH.

EROSION MATTING DETAIL (SLOPES 4:1)

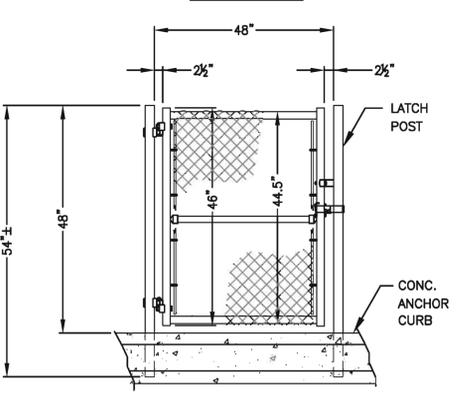


- NOTES:**
- THE CONTRACTOR SHALL MAINTAIN THE EROSION CONTROL BERM IN A FUNCTIONAL CONDITION AT ALL TIMES AND IT SHALL BE ROUTINELY INSPECTED.
 - WHERE THE BERM REQUIRES REPAIR, IT WILL BE ROUTINELY REPAIRED.
 - THE CONTRACTOR SHALL REMOVE SEDIMENTS COLLECTED AT THE BASE OF THE BERM WHEN THEY REACH 1/3 OF THE EXPOSED HEIGHT OF THE BERM, OR AS DIRECTED BY THE ENGINEER.

SILT SOCK EROSION CONTROL DETAIL



GATE PLAN



4' WIDE SINGLE LEAF GATE ON CONCRETE ANCHOR CURB DETAIL

N.T.S.

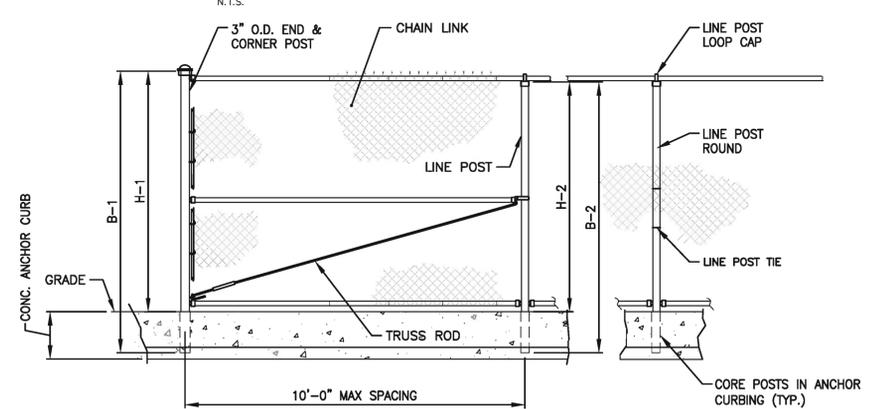
FENCE HEIGHT NOMINAL HEIGHT	END & CORNER POSTS		LINE POSTS	
	B-1 BAR LENGTH	H-1 HEIGHT ABOVE GRADE	B-2 BAR LENGTH	H-2 HEIGHT ABOVE GRADE
4'-0"	7'-0"	4'-0 5/8"	6'-8"	3'-8 7/8"
5'-0"	8'-0"	5'-0 5/8"	7'-8"	4'-8 7/8"
8'-0"	11'-0"	8'-0 5/8"	10'-8"	7'-8 7/8"

SINGLE OR DOUBLE LEAF GATES		
NOM HEIGHT (H)	UPRIGHT HT (U)	FRAME HT (F)
WITHOUT BARBED WIRE	ACTUAL DIM	ACTUAL DIM
4'-0"	3'-10"	3'-8 1/2"
5'-0"	4'-10"	4'-8 1/2"
8'-0"	7'-10"	7'-8 1/2"

SINGLE LEAF GATES		
OPENING	GATE POSTS	HINGE SPACE (S)
FACE TO FACE	SQ & RND SIZES	POST TO UPRIGHT
3'-0" THROUGH 6'-0"	2 1/2" OR 3" OD	FOR SQUARE & ROUND GATE POSTS: 2 1/4" [57MM]

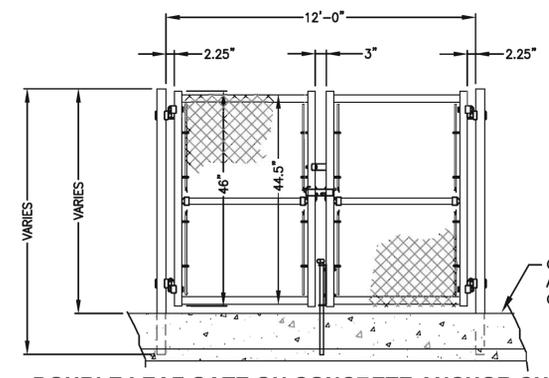
DOUBLE LEAF GATES		
OPENING	GATE POSTS	HINGE SPACE (S)
FACE TO FACE	SQ & RND SIZES	POST TO UPRIGHT
12'-0" THROUGH 24'-0"	3" SQ OR 4" OD	FOR SQUARE & ROUND GATE POSTS: 2 1/4" [57MM]

CHAIN LINK FENCE & GATE NOTES



CHAIN LINK FENCE ON CONCRETE ANCHOR CURB DETAIL

N.T.S.



DOUBLE LEAF GATE ON CONCRETE ANCHOR CURB DETAIL

N.T.S.

N.O.I. SET



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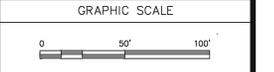
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PROJECT
ACTON BOXBOROUGH REGIONAL HIGH SCHOOL LOWER FIELDS RENOVATIONS PROJECT
36 CHARTER ROAD
ACTON, MA
OWNER
ACTON BOXBOROUGH REGIONAL SCHOOL DISTRICT
16 CHARTER ROAD
ACTON, MA

REVISIONS		
NO.	DATE	DESCRIPTION
1	4/30/12	CONCOM COMMENTS

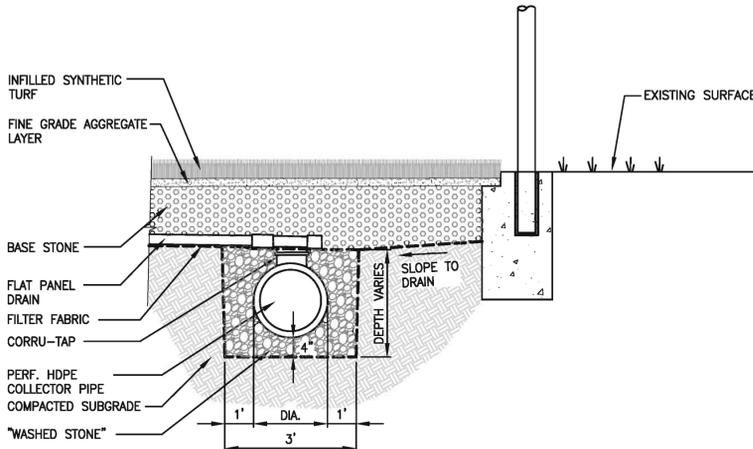
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DESIGNED BY	PS
DRAWN BY	WAH/BTC
CHECKED BY	WUS/JMP
DATE	4-5-12
DRAWING SCALE	1"=50'-0"



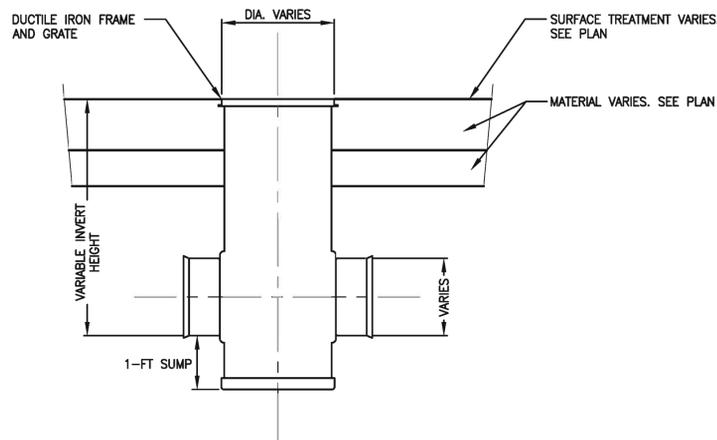
SHEET TITLE

DETAIL SHEET 1 OF 6

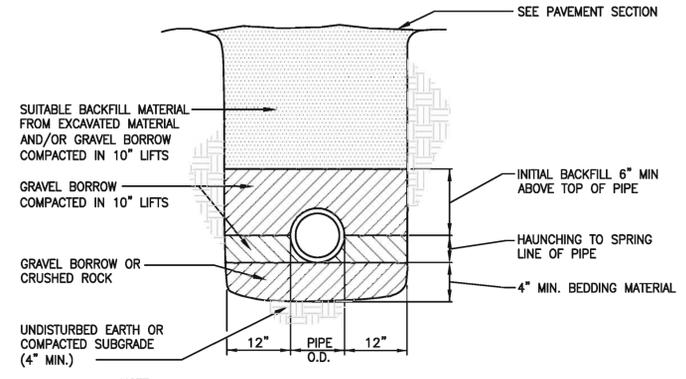
DRAWING NO.	C501
PROJECT NO.	715260



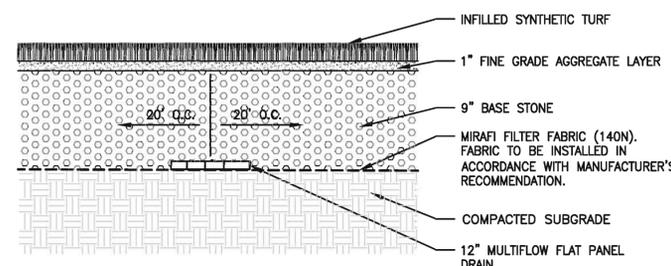
TYPICAL COLLECTOR PIPE AND LATERAL CONNECTION
N.T.S.



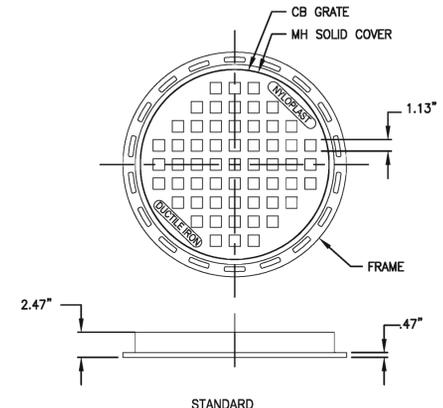
NYLOPLAST DRAIN MANHOLE OR CATCH BASIN
N.T.S.



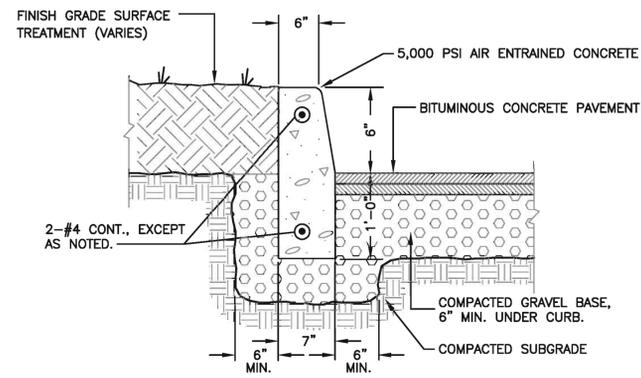
NON-PERFORATED HDPE TRENCH DETAIL (UP TO 24" DIA)
N.T.S.



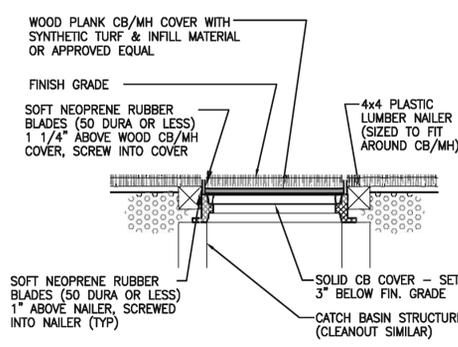
FIELD UNDERDRAIN
N.T.S.



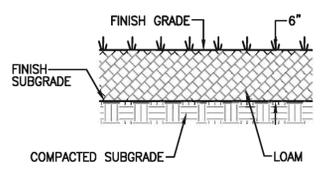
NYLOPLAST MH/CB COVER
N.T.S.



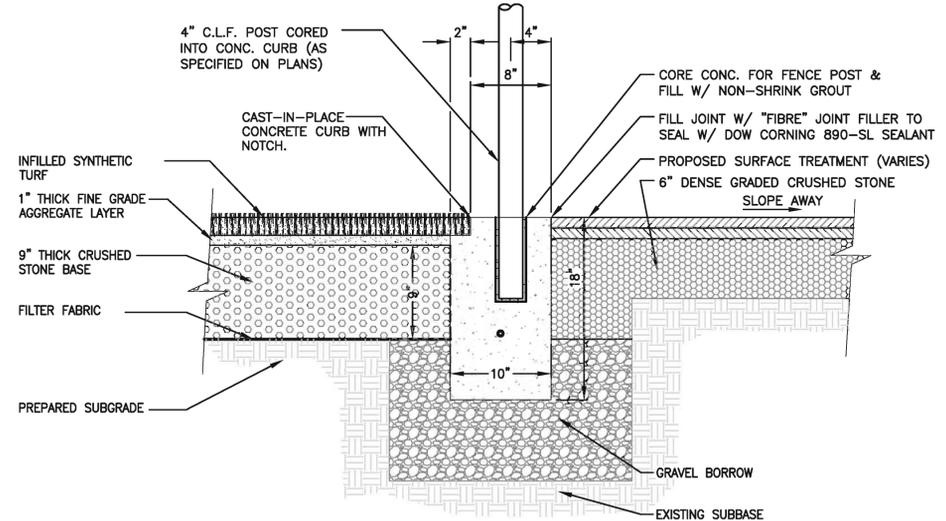
PRECAST CONCRETE CURB
N.T.S.



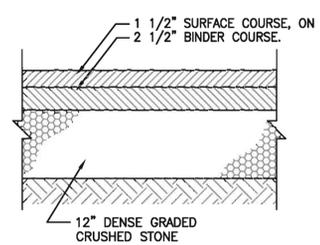
MANHOLE COVER AT SYNTHETIC TURF
N.T.S.



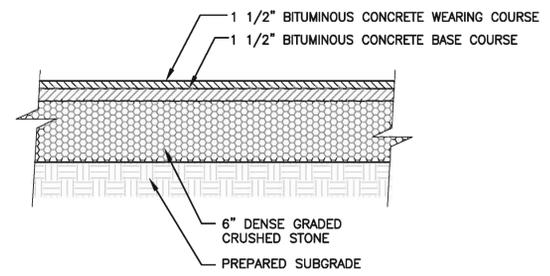
LOAM AND SEED (DISTURBED AREAS)
N.T.S.



CONCRETE ANCHOR CURB W/ FENCE
N.T.S.



4" BITUMINOUS CONCRETE PAVEMENT
N.T.S.



3" BITUMINOUS CONCRETE PAVEMENT
N.T.S.



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OWNER
ACTON BOXBOROUGH REGIONAL SCHOOL DISTRICT
16 CHARTER ROAD
ACTON, MA

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DESIGNED BY	PS
DRAWN BY	WAH/BTC
CHECKED BY	WUS/JMP
DATE	4-5-12
DRAWING SCALE	1"=50'-0"

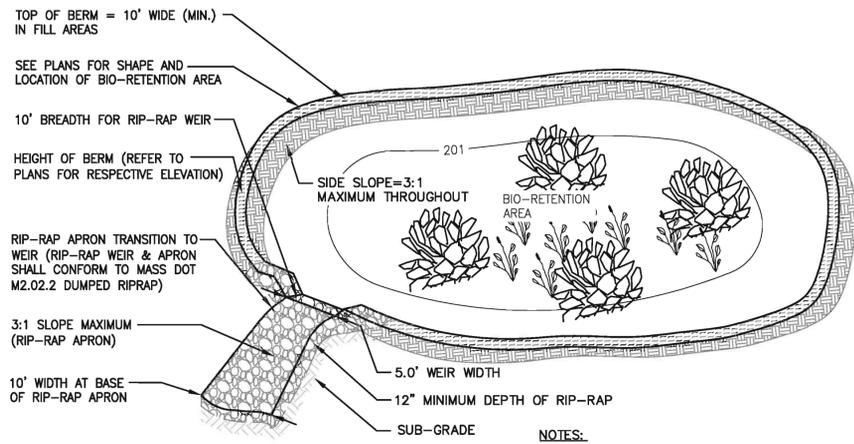
GRAPHIC SCALE	
0 50' 100'	

SHEET TITLE

DETAIL SHEET
2 OF 6

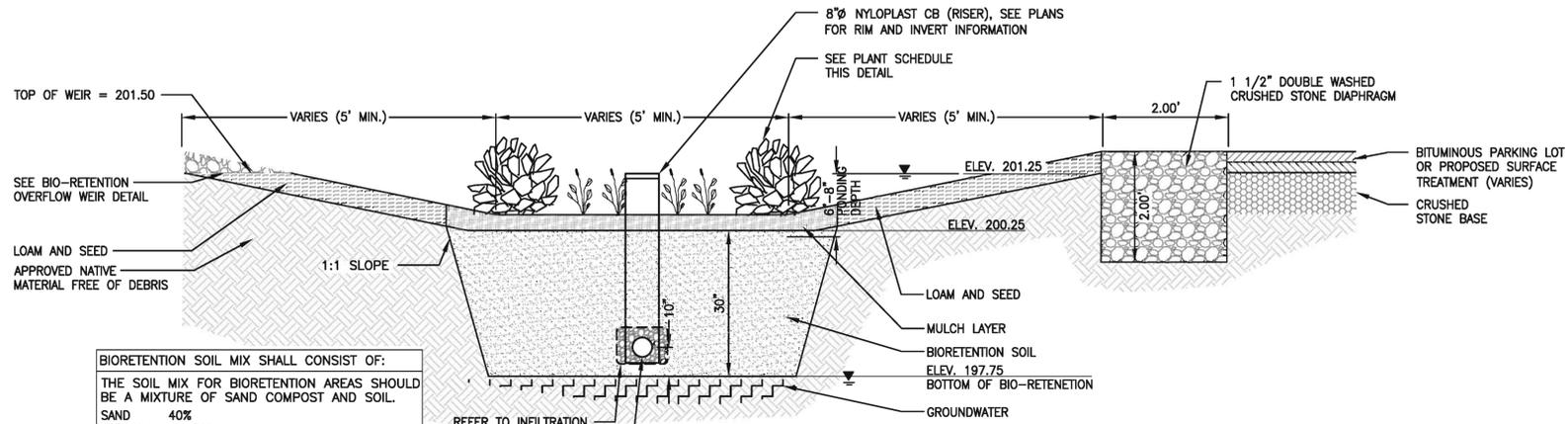
DRAWING NO.	C502
PROJECT NO.	715260

N.O.I. SET



- NOTES:**
- RIP-RAP APRON SHALL EXTEND A MINIMUM OF 10' (HORIZONTALLY) FROM EDGE OF RIP-RAP WEIR.
 - WEIR AND APRON SHALL BE UNDERLAID WITH NON-WOVEN GEOTEXTILE FABRIC

BIO-RETENTION OVERFLOW WEIR
 N.T.S.

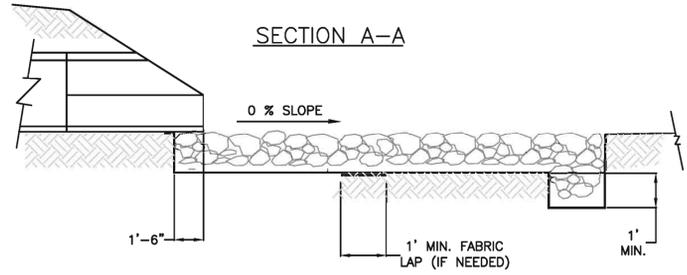
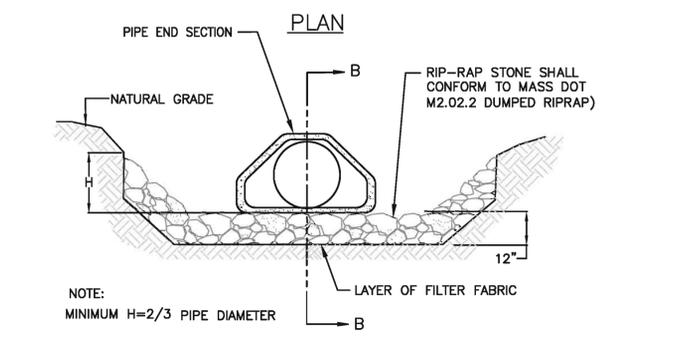
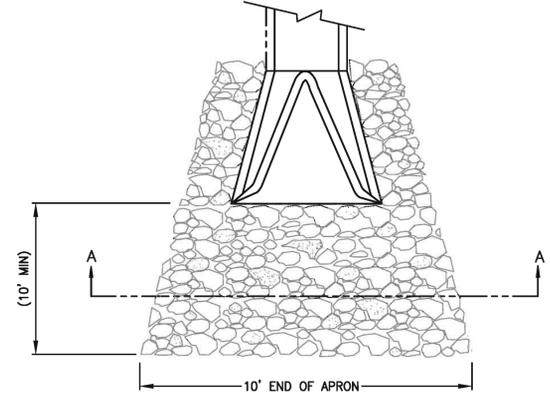


BIORETENTION SOIL MIX SHALL CONSIST OF:
 THE SOIL MIX FOR BIORETENTION AREAS SHOULD BE A MIXTURE OF SAND COMPOST AND SOIL.
 SAND 40%
 TOPSOIL 20-30%
 COMPOST 30-40%
 SEE SHEET C103 FOR ADDITIONAL BIO-RETENTION AREA NOTES.

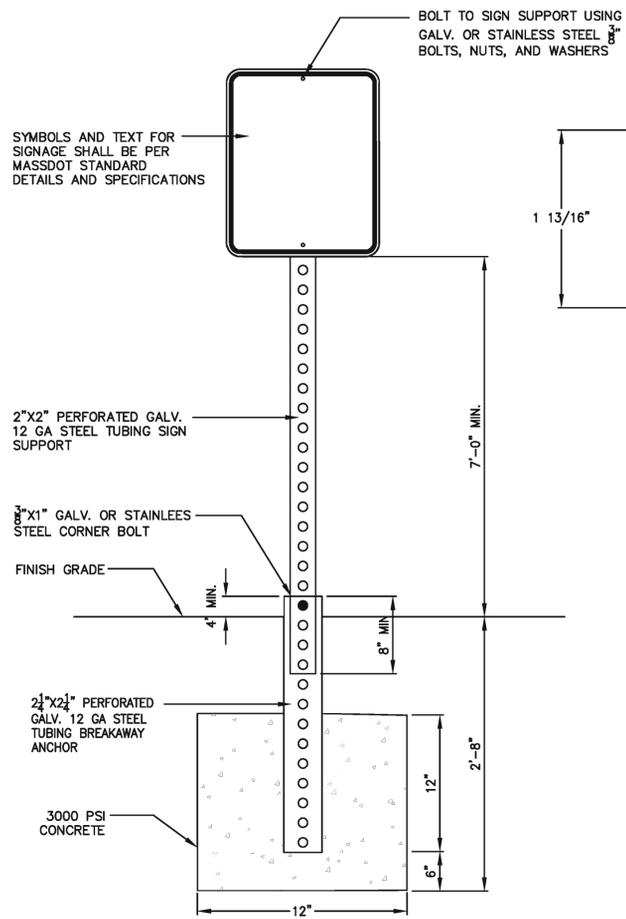
PLANT SCHEDULE	
1	(<i>ANDROPOGON VIRGINICUS</i>) BROOMSEDGE
2	(<i>CAREX VULPINODEA</i>) FOX SEDGE
3	(<i>JUNIPERUS COMMUNIS</i>) COMMON JUNIPER

NOTES:

- SPECIES LISTED ARE SUGGESTED BY THE ENGINEER, EXTRACTED FROM THE MASSACHUSETTS STORMWATER (MASWM) HANDBOOK
- PLANT SPECIES SHALL COMPLY WITH MASWM HANDBOOK VOLUME 2, CHAPTER 2, PLANT SPECIES SUITABLE FOR USE IN BIO-RETENTION AND SHALL CONTAIN AT LEAST 3 SPECIES EACH OF HERBACEOUS PERENNIALS AND SHRUBS
- PLANT SPACING SHALL BE PER MASWM STANDARDS, WITH ONE SHRUB PER 50 SQUARE FEET OF BIO-RETENTION AREA

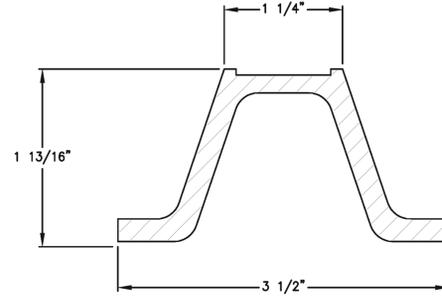


FLARED END SECTION
 N.T.S.

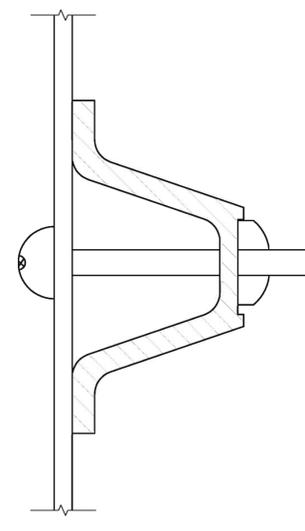


- NOTES:**
- ALL WORK SHALL BE DONE IN ACCORDANCE WITH STATE AND LOCAL REGULATIONS.
 - PLACE SIGN AS REQUIRED TO FULLY SATISFY ALL STATE AND LOCAL SIGNAGE LOCATION REQUIREMENTS.
 - SECURE SIGN TO POST USING TWO GALV. BOLTS, NUT, AND WASHERS.
 - SIGN SUPPORT SHALL BE CONFORMANCE WITH BREAKAWAY SIGN SUPPORT DETAIL MDOT SHA STANDARD NO-802.04.

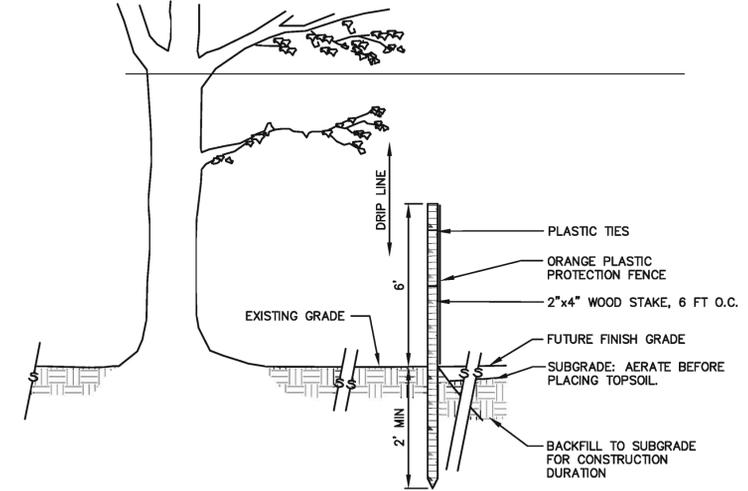
SIGN/POST MOUNTING DETAIL
 N.T.S.



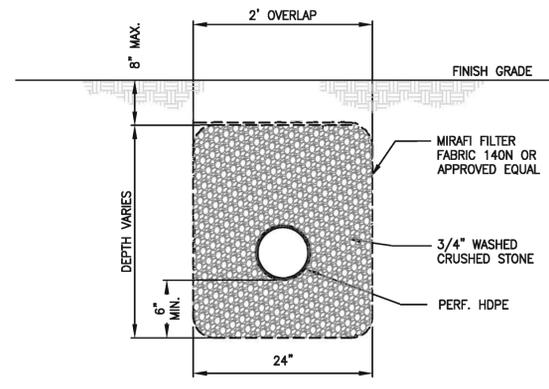
POST SECTION
 N.T.S.



MOUNTING DETAIL
 N.T.S.



TREE PROTECTION FENCE AND BACKFILL MEASURES
 N.T.S.



INFILTRATION TRENCH SECTION
 N.T.S.



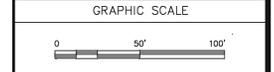
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 ACTON, MA
 OWNER
 ACTON BOXBOROUGH REGIONAL SCHOOL DISTRICT
 16 CHARTER ROAD
 ACTON, MA

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DRAWN BY	WAH/BTC
CHECKED BY	WUS/JMP
DATE	4-5-12
DRAWING SCALE	1"=50'-0"



SHEET TITLE

DETAIL SHEET
 4 OF 6

N.O.I. SET

DRAWING NO.

C504

PROJECT NO. 715260



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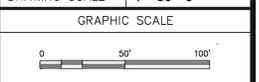
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DRAWING SCALE	1"=50'-0"

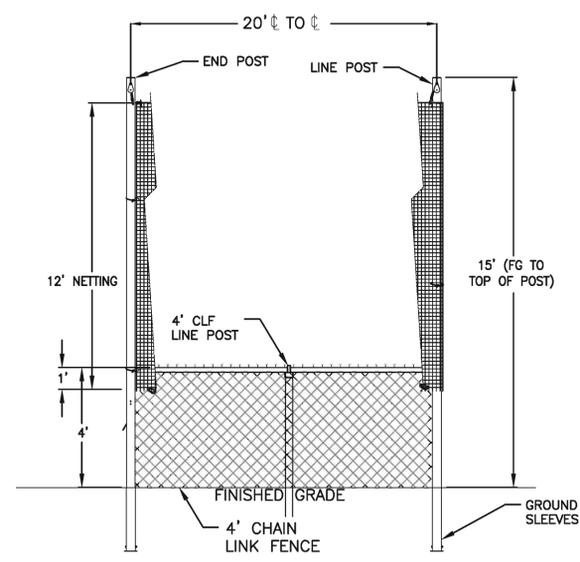
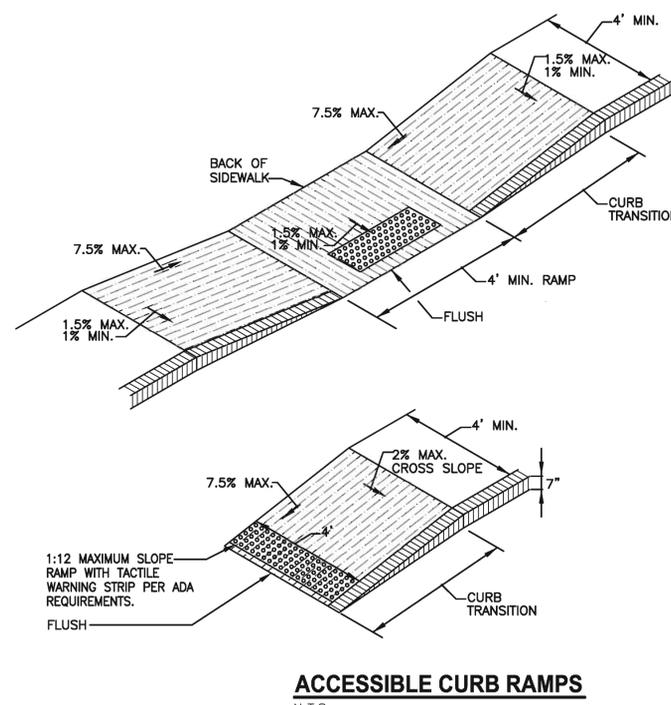


SHEET TITLE

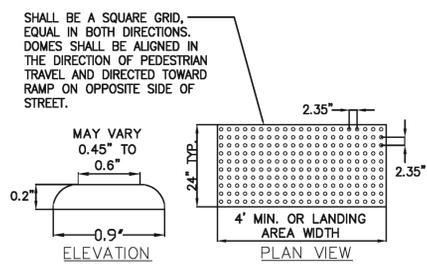
DETAIL SHEET
 5 OF 6

DRAWING NO.	C505
PROJECT NO.	715260

- NOTES:**
- SEE PLANS FOR CURB TYPE.
 - THE MAXIMUM ALLOWABLE SIDEWALK AND CURB RAMP CROSS SLOPES SHALL BE 2.0% (1% MIN.).
 - THE MAXIMUM ALLOWABLE SLOPE OF ACCESSIBLE ROUTE EXCLUDING CURB RAMPS SHALL BE 5.0%.
 - THE MAXIMUM ALLOWABLE SLOPE OF ACCESSIBLE ROUTE CURB RAMPS SHALL BE 7.5%.
 - GRADE BASE OF RAMP TO PREVENT PONDING.
 - ALL RAMPS (INDICATED BY) SHALL BE CEMENT CONCRETE WITH A TEXTURED AND COLORED NON-SLIP SURFACE (WARNING MAT) CONFORMING TO APPLICABLE LOCAL, STATE AND FEDERAL REGULATIONS. ACCESSIBLE RAMP DETECTABLE WARNING MAT SHALL BE AS MANUFACTURED BY "THE DURABAK COMPANY" 303-690-7190, OR APPROVED EQUAL. THE WARNING MAT SYSTEMS SHALL CONFORM TO ALL RELEVANT PROVISIONS OF THE AMERICANS WITH DISABILITIES ACT (ADA) REQUIREMENTS AND THE MASSACHUSETTS ARCHITECTURAL ACCESS BOARD REQUIREMENTS, WHICHEVER IS STRICTER. THE SYSTEMS SHALL BE A PERMANENT MAT THAT IS APPLIED AT ACCESSIBLE RAMPS DIRECTLY TO CLEAN DRY CONCRETE SURFACES WITH LONG-LASTING ADHESIVE TO AID THE BLIND AND VISUALLY IMPAIRED. THE MAT SHALL INCORPORATE TRUNCATED DOMES POSITIONED TO ADA SPECIFICATIONS.



- NOTES:**
- NETTING SHALL OVERLAP WITH THE CHAIN LINK FENCE A MINIMUM OF 1-FOOT AND SHALL BE SECURED TO THE FENCING FABRIC WITH QUICK CLIP SPRING HOOKS.
 - NETTING SHALL OVERLAP THE CHAIN LINK FENCE ON THE PLAYING FIELD SIDE OF THE FENCE FABRIC.



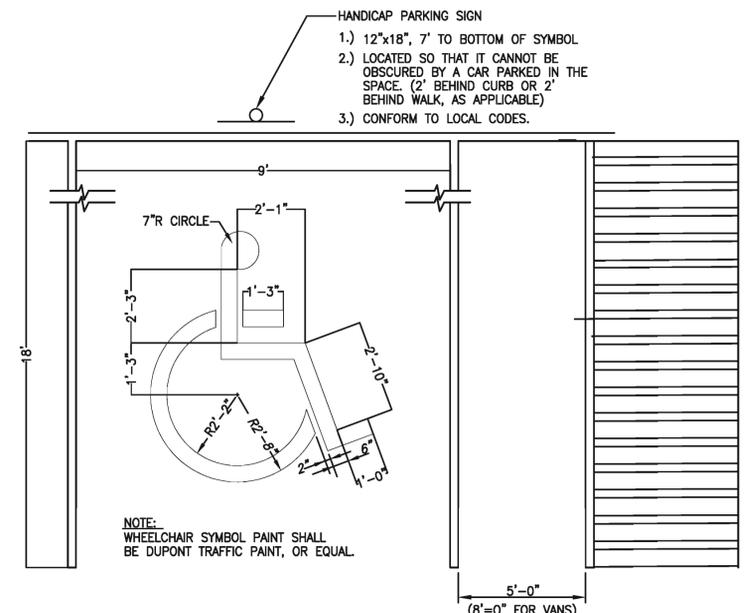
TACTILE WARNING STRIP
 N.T.S.

NOTE: TACTILE WARNING SHALL BE BRICK RED UNLESS OTHERWISE NOTED.

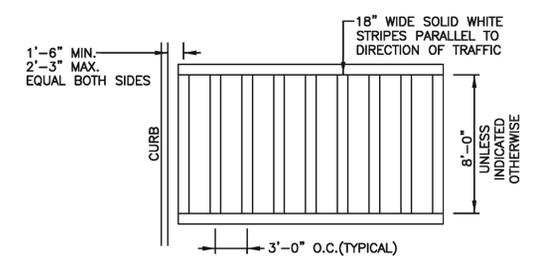


HANDICAPPED SIGN
 N.T.S.

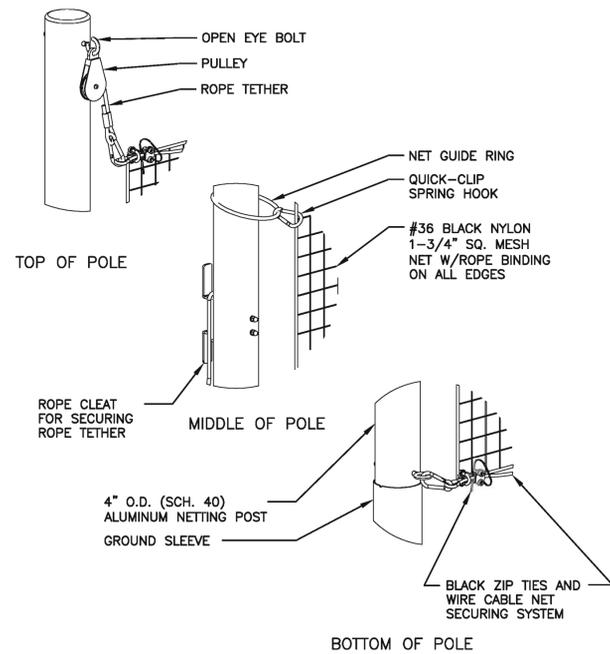
NOTE: SIGN SHALL BE INSTALLED ON BREAKAWAY SIGN POST



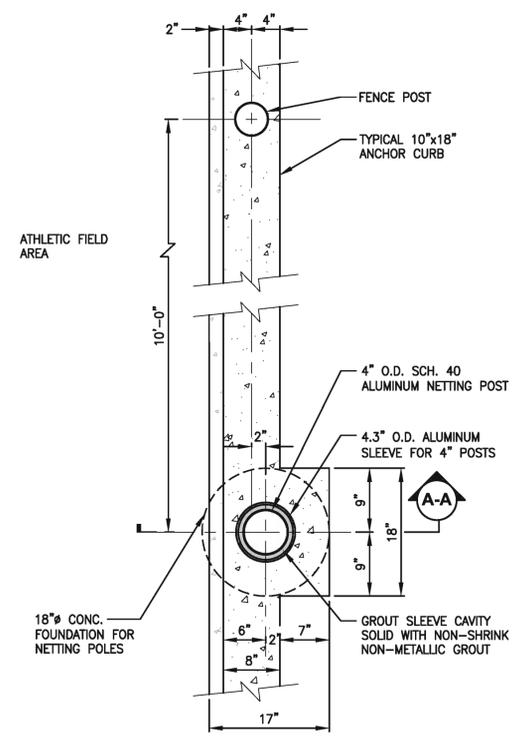
HANDICAPPED PARKING SPACE
 N.T.S.



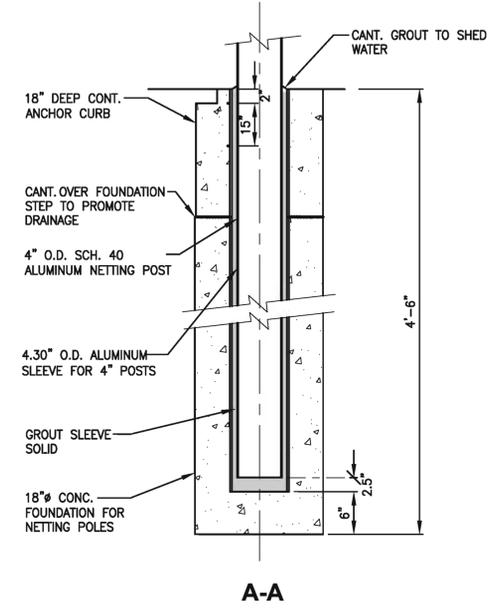
CROSSWALK
 N.T.S.



4' STRAIGHT POLE BALL SAFETY SYSTEM
 N.T.S.



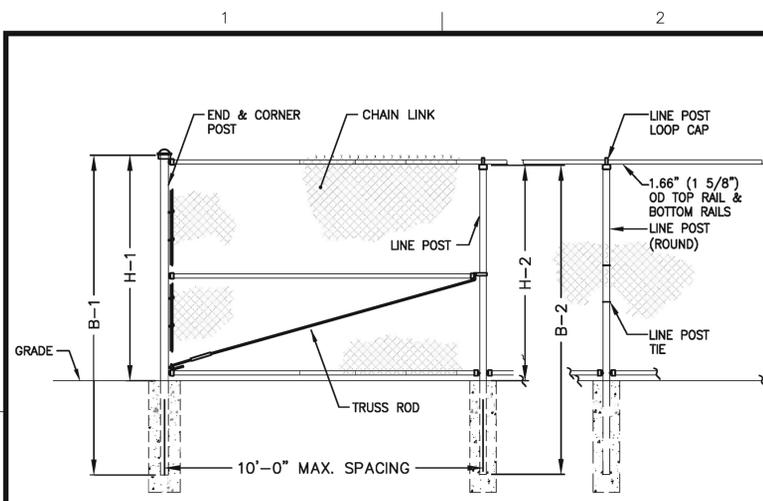
15' NETTING POST FOUNDATION DETAIL
 N.T.S.



SECTION AT 15' NETTING POST FOUNDATION
 N.T.S.

- NOTES:**
- NETTING POSTS TO BE PROVIDED AT 20- FEET ON CENTER, SHALL COINCIDE WITH ALL CHAIN LINK FENCE POSTS (WHERE POSSIBLE) AND SHALL BE LOCATED AT ALL CORNERS AND ENDS AS INDICATED ON THE PLANS.

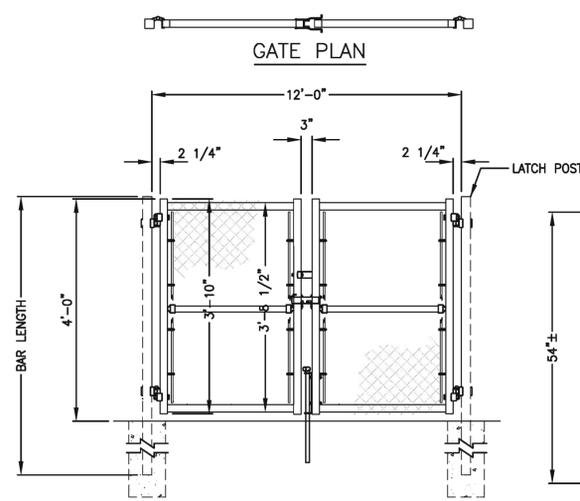
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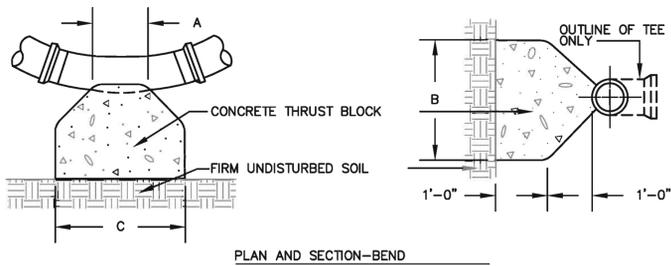
FENCE HEIGHT	END & CORNER POSTS		LINE POSTS	
	NOMINAL HEIGHT	B-1 BAR LENGTH	H-1 HEIGHT ABOVE GRADE	B-2 BAR LENGTH
4'-0"	7'-0"	4'-0 5/8"	6'-8"	3'-8 7/8"

- NOTES:**
- ALL 4 FT. HIGH CHAIN LINK FENCE FABRIC TO BE KNUCKLED (TOP AND BOTTOM)
 - ALL CHAIN LINK FENCE POSTS, FABRIC, TIES AND MATERIALS SHALL BE BLACK VINYL COATED.
 - CENTER UPRIGHT REQUIRED ON GATE LEAVES 8'-0" & WIDER. CENTER RAIL REQUIRED ON GATE LEAVE 6'-0" & HIGHER.
 - CONCRETE FOOTING DIAMETERS SHALL BE FOUR (4) x THE POST DIAMETER.

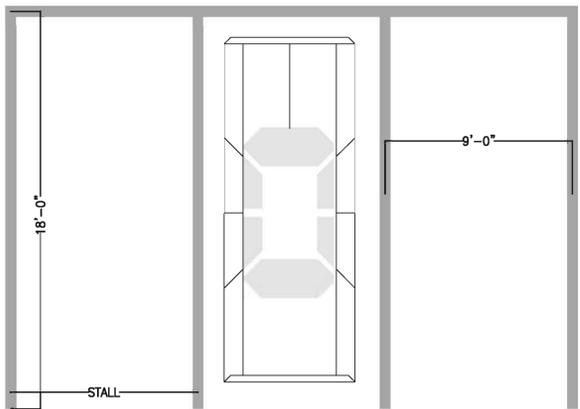
4' CHAIN LINK FENCE
N.T.S.



12' DOUBLE GATE @ 4' FENCE DETAIL
N.T.S.



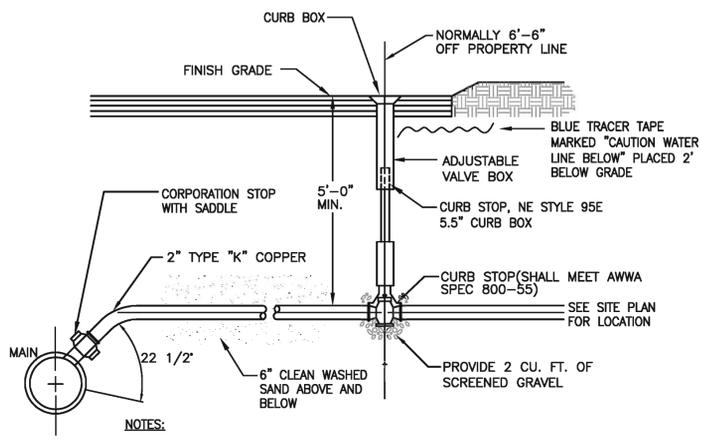
TYPICAL CONCRETE THRUST BLOCK DETAIL
N.T.S.



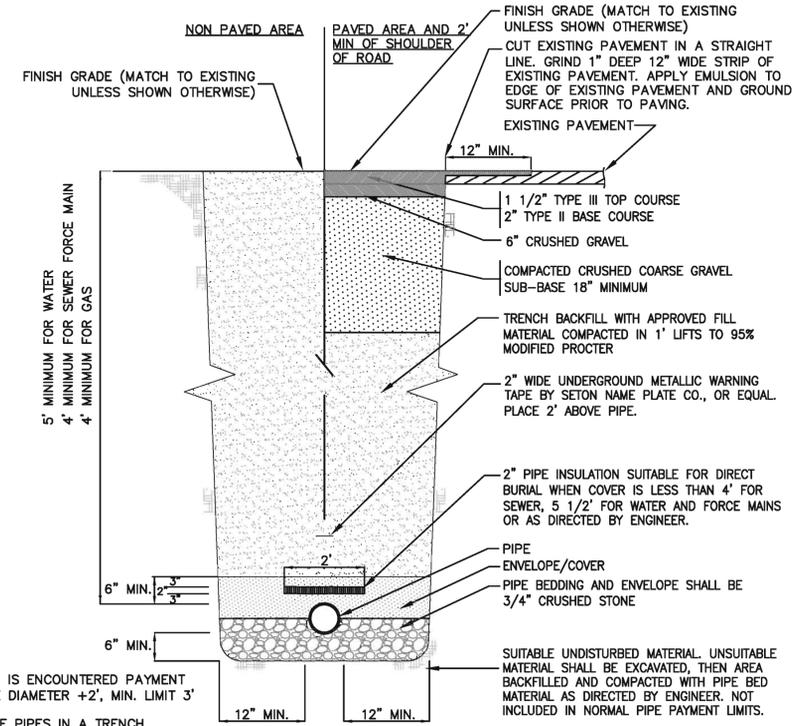
TYPICAL PARKING SPACE
N.T.S.

- NOTES**
- PROVIDE CONCRETE THRUST BLOCKS AT ALL BENDS, DEAD ENDS & TEES UNLESS OTHERWISE DIRECTED. CONCRETE FOR ALL THRUST BLOCKS TO BE PLACED AGAINST FIRM UNDISTURBED SOIL AND PROVIDE APPROVED ANCHOR HARNESS RODS & SOCKET CLAMPS AS SPECIFIED & IN ACCORDANCE WITH PIPE MANUFACTURERS RECOMMENDATIONS WHERE SOIL HAS BEEN DISTURBED OR THRUST BLOCKS CANNOT BE USED AS DIRECTED BY THE ARCHITECT.
 - ALL SOCKET CLAMP METAL SHALL BE COATED WITH BLACK ASPHALTUM OR OTHER APPROVED WATER DEPARTMENT COATINGS.
 - CONCRETE THRUST BLOCKS POURED BEHIND THREE WAY TEE & HYDRANT SHOE TO BE USED WITH SOCKET CLAMPS.
 - NO CONCRETE SHALL COVER PIPE JOINTS, FITTING JOINTS, BOLTS OR HYDRANT DRAINS.

THRUST BLOCK SCHEDULE	SIZE OF PIPE PRODUCING THRUST		
	4"	6"	8"
22-1/2" BEND	1'-0"	2'-0"	2'-0"
45" BEND	1'-0"	2'-0"	2'-0"
90" BEND	1'-0"	2'-0"	2'-0"
12"x12"x4", 10"x10"x4", 8"x8"x4", 6"x6"x4", 4"x4"x4" TEES	1'-0"	2'-0"	2'-0"
PLUGS	1'-0"	2'-0"	2'-0"
HYDRANT	1'-0"	2'-0"	2'-0"



TYPICAL DOMESTIC WATER SERVICE DETAIL
N.T.S.



TYP. PIPE IN TRENCH DETAIL
N.T.S.

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DRAWING SCALE	1"=50'-0"

GRAPHIC SCALE
0 50' 100'

SHEET TITLE

DETAIL SHEET
6 OF 6

N.O.I. SET

DRAWING NO.

C506

PROJECT NO. 715260