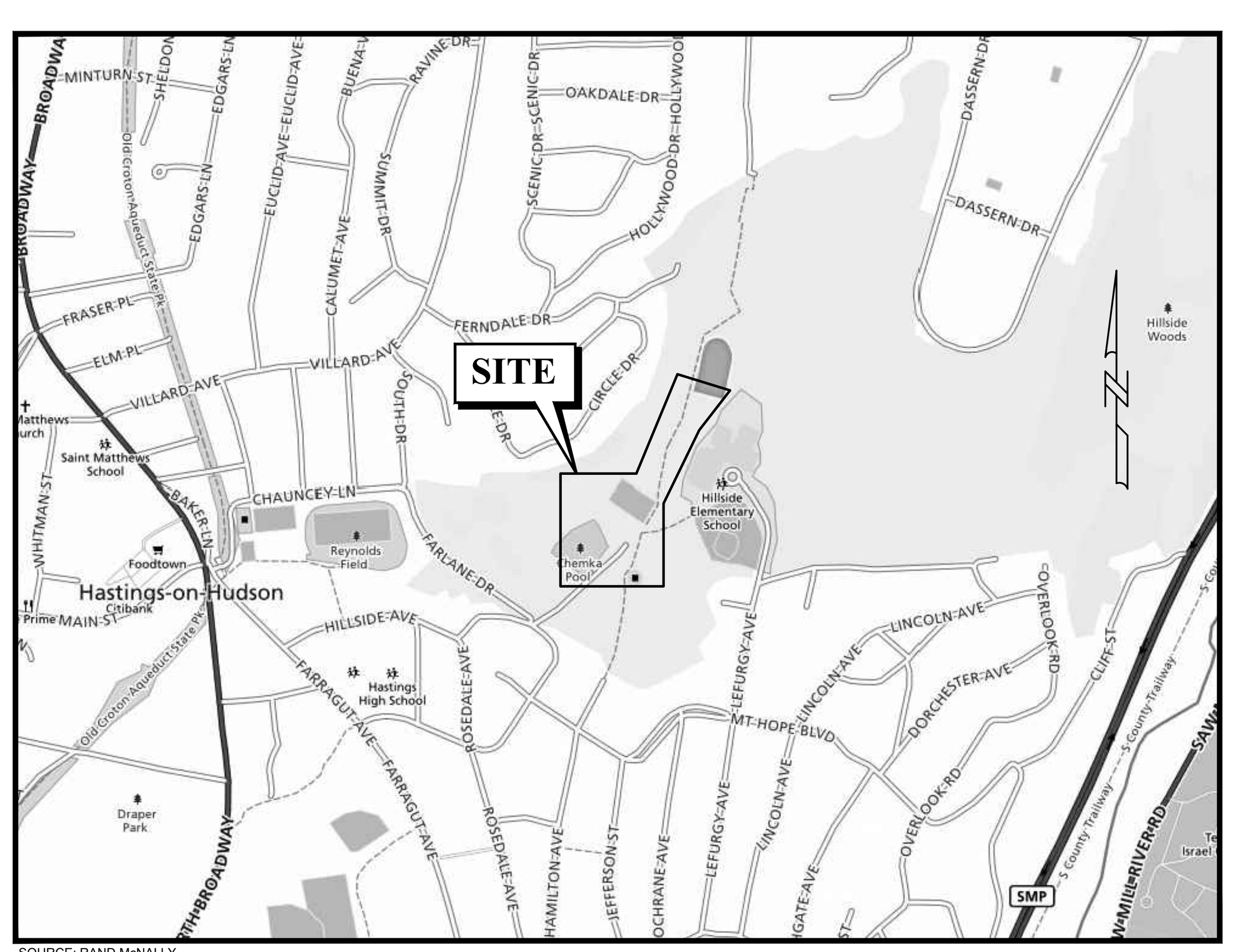

ALTERNATE: EXIST. TRAIL TO BE RAISED. PROVIDE UNIFORM SLOPE UPWARDS FROM EDGE OF PAV'T. FOR 50 L.F.
PROP. SILT FENCE (TYP.)
ERODED SLOPE TO BE FILLED & GRADED TO ORIGNAL CONDITION; PROVIDE TOPSOIL & SEED; PROTECT W/ EROSION CONTROL BLANKET
ALTERNATE: PROP. DI #7 RIM 99.8 (V.I.F.) INV 97.2 (V.I.F.)
ALTERNATE: PROP. UNDERDRAIN
ERODED SLOPE TO BE FILLED & GRADED TO ORIGNAL CONDITION; PROVIDE TOPSOIL & SEED; PROTECT W/ EROSION CONTROL BLANKET
PROP. DI #2 W/ NOTCHED INLETS (EXIST. STRUCTURE TO BE REMOVED) RIM 100.8 INV IN (30") 96.2 INV IN (12") 96.3 INV OUT 95.9 RECONNECT EXIST. 6" & 8" PIPES
PROP. DI #1 RIM 100.6 INV IN 95.3 INV OUT (V.I.F.) (V.I.F. LOCATION W/ ENG'R.)
EXIST. 36" CMP TO BE REMOVED & REPLACED W/ 30" HDPE
EXIST. 36" CMP TO BE LINED W/ 30" PVC PIPE
PROP. 30" WIDE FRENCH DRAIN (REMOVE EXIST. TRENCH DRAIN)
PROP. 12" PERF. HDPE
PROP. 12" HDPE
PROP. DI #6 RIM 111.5 INV 108.9
PROP. CB #5 RIM 111.5 INV IN 108.2 INV OUT 108.0
PROP. CB#4 RIM 111.1 INV IN 107.6 INV OUT 107.4
PROP. CB #3 RIM 110.2 INV IN 106.9 INV OUT 105.1
EXIST. CONC. WALL TO BE REMOVED, REPLACE W/ BELGIAN BLOCK CURB MATCHING EXISTING
EXIST. 27" CMP TO BE REMOVED & REPLACED W/ 30" HDPE
LIGHT POLE TO BE PROTECTED & SUPPORTED IF NECESSARY DURING EXCAVATION
WADING POOL
ONE STY. CONC. BLOCK BUILDING
IN-GROUND SWIMMING POOL
TENNIS COURTS
WOODED AREA
CHEMKA POOL ROAD
GRAVEL DRIVE
ALTERNATE: PROP. STONE RIPRAP
ALTERNATE: NEW PIPE TO BE CONNECTED TO EXIST. STONE HEADWALL IF POSSIBLE (V.I.F. W/ ENG'R.). REMOVE EXIST HEADWALL AND CONSTRUCT NEW CONC. HEADWALL #11 IF DIRECTED BY ENG'R. INV 117.0 (V.I.F.)
ALTERNATE: PROP. DI #9 RIM 117.3 INV OUT 114.7
ALTERNATE: PROP. CONNECTION TO EXIST DMH INV 113.9
ALTERNATE: PROP. 12" HDPE
ALTERNATE: EXIST. 36" RCP TO BE REMOVED & REPLACED W/ 48" HDPE
ALTERNATE: EXIST. 18" CMP TO BE REMOVED & REPLACED W/ 30" HDPE
ALTERNATE: PROP. BERM
ALTERNATE: PROP. END SECTION #10 (EXIST. HEADWALL TO BE REMOVED) INV 118.4 (V.I.F.)
ALTERNATE: PROP. STONE RIPRAP
ALTERNATE: (ENG'R. & CONTRACTOR TO INSPECT STUCTURE, REPLACE IF DIRECTED BY ENG'R.; V.I.F. REQ'D. DIMENSIONS) DMH #12 RIM 120.5 INV IN (48") 113.7 (V.I.F.) INV IN (30") 115.3 INV IN (12") 113.9 INV OUT 110.7 (V.I.F.)
GRAVEL DRIVE TO BE REGRADED, REMOVE EXCESS MATERIAL & PLACE NEW ITEM 4 AS DIRECTED BY ENG'R.
MATCH LINE DWG. C-2
20 0 20 40 60
Scale 1" = 20'



LOCATION MAP

N.T.S.

NOTES:

1. CONTRACTORS ARE REQUIRED TO VISIT THE SITE PRIOR TO SUBMITTING A BID.
2. BASE MAP INFORMATION IS BASED ON A SURVEY ENTITLED "TOPOGRAPHIC SURVEY, JULIUS CHEMKA POOL, SITUATE IN THE VILLAGE OF HASTINGS-ON-HUDSON, TOWN OF GREENBURGH, WESTCHESTER COUNTY, NEW YORK" DATED NOVEMBER 8, 2001, REVISED JANUARY 8, 2002, PREPARED BY ROLAND K. LINK, P.L.L.C.
3. EXISTING CONDITIONS AND ELEVATIONS MAY VARY FROM THOSE SHOWN HEREON. THE CONTRACTOR SHALL VERIFY EXISTING CONDITIONS AND ELEVATIONS IN THE FIELD.

LEGEND

- PROP. CATCH BASIN
- PROP. DRAINAGE INLET
- PROP. STORM PIPE
- PROP. UNDERDRAIN
- 112 — PROP. CONTOUR LINE
- × [113.60] PROP. SPOT ELEVATION
- SF — SF — PROP. SILT FENCE

REV.	DATE	DESCRIPTION

TITLE: SITE PLAN (1)

PROJECT: PROPOSED
HILLSIDE PARK STORM DAMAGE RESTORATION

CHEMKA POOL ROAD

VILLAGE OF HASTINGS-ON-HUDSON, WESTCHESTER COUNTY, NEW YORK

JAMES J. HAHN ENGINEERING, P.C.
Putnam Business Park
1689 Route 22
Brewster, New York 10509
Tel: (845) 279-2220

SCALE	DATE
1" = 20'	6/20/22
DRAWING NO.	SHEET NO.
C-1	1 of 5

ERODED AREA TO BE FILLED W/ GROUTED STONE RIPRAP (D_{50} = 12") AS DIRECTED BY ENG'R.

PROP. STONE RIPRAP (TYP.)

2/C-5 PROP. BOX BEAM GUIDE RAIL (TYP.)

PROP. 10'W GRAVEL DRIVEWAY

PROP. 2'-6" x 8'-9" ALUM. BOX CULVERT (EXIST. PIPE CULVERT TO BE REMOVED) 1/C-5

PROP. ALUM. HEADWALL & WINGWALLS (TYP.) 1/C-5

EXIST. STONE CULVERT TO BE REMOVED & REPLACED W/ STONE RIPRAP CHANNEL (SUITABLE EXCAVATED MATERIAL TO BE USED FOR GRAVEL DRIVEWAY CONSTRUCTION) 3/C-5

MATCH LINE

DWG. C-1

Pond

Wood Footbridge over Conc. Spillway

Conc. Walls

Brook

Gravel Drive

Playground

Asphalt Play Area

School Building

20 0 20 40 60

Scale 1" = 20'

REV.	DATE	DESCRIPTION

TITLE: SITE PLAN (2)

PROJECT:

PROPOSED HILLSIDE PARK STORM DAMAGE RESTORATION

CHEMKA POOL ROAD

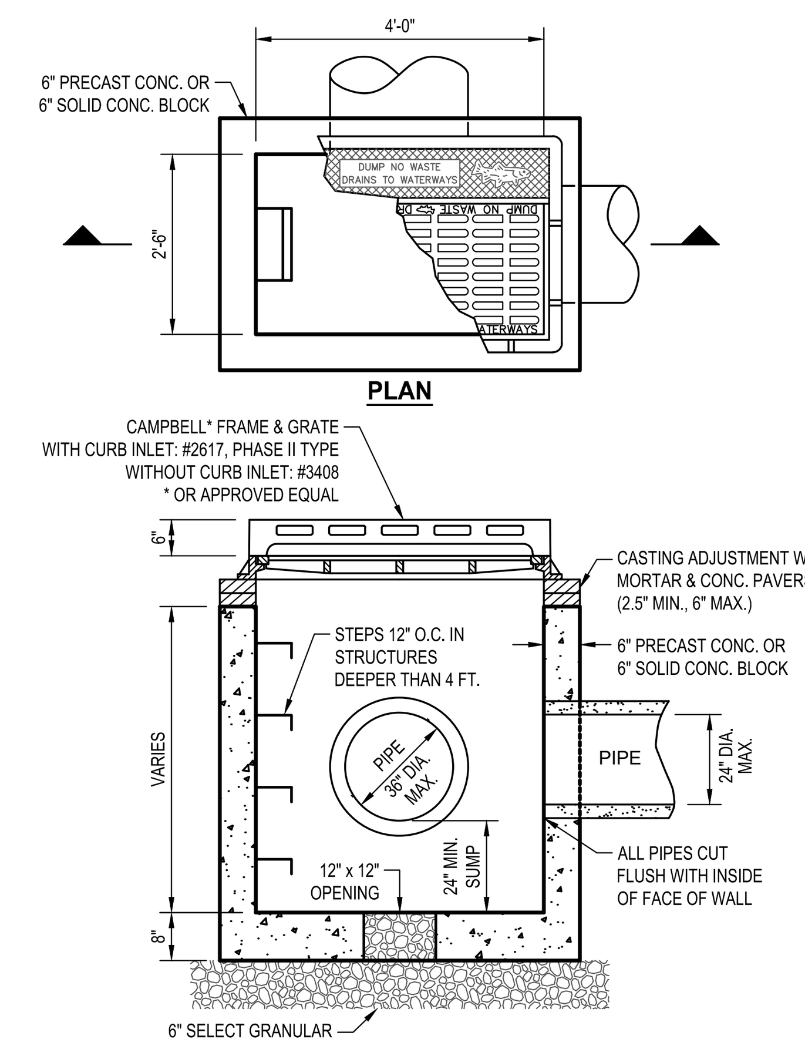
VILLAGE OF HASTINGS-ON-HUDSON, WESTCHESTER COUNTY, NEW YORK

JAMES J. HAHN ENGINEERING, P.C.
Putnam Business Park
1689 Route 22
Brewster, New York 10509
Tel: (845) 279-2220

SCALE	DATE
1" = 20'	6/20/22
DRAWING NO.	SHEET NO.
C-2	2 OF 5

GENERAL NOTES

1. All work and materials shall be in accordance with these plans, specifications, any revisions thereto, and the rules and regulations of the Village of Hastings–on–Hudson.
2. The subsurface information shown hereon is not guaranteed as to accuracy or completeness. The Contractor shall verify the location of all existing utility lines whether in public right–of–way, in easements, or in private property prior to starting any excavation and shall be responsible for the same. The Contractor shall be responsible for contacting the Underground Facilities Protective Organization, pursuant to N.Y.S. Law, 16 NYCRR Code 753.
3. The Contractor shall be responsible for the relocation of any utility service line or valve which is in interference with the proposed work.
4. Existing trees shall be preserved and protected wherever possible and shall only be removed with the approval of the Engineer. Tree roots shall be avoided wherever possible. Where tree roots cannot be avoided, they shall be cut cleanly. Tree roots shall be kept moist while trenches are open.
5. The Contractor shall verify all existing and proposed elevations in the field.
6. The maintenance and protection of traffic schemes, both pedestrian and vehicular, shall be the responsibility of the Contractor. Access to all commercial, institutional and residential parking facilities shall be maintained at all times. A safe means of pedestrian access to and from all points within the contract limit shall be provided. The Contractor must submit traffic maintenance and staging schemes in writing to the Engineer for approval. All traffic maintenance devices, including, but not limited, to temporary signs, barricades, steel plates, lights and warning signals, shall be constructed and displayed in accordance with the rules and regulations of the Village of Hastings–on–Hudson and the Federal MUTCD.
7. The Contractor shall provide the Engineer with a telephone number of the person responsible in the case of an emergency, 24 hours a day, 7 days a week.
8. All damage to public or private facilities caused by the Contractor's operation shall be repaired to the satisfaction of the Owner at the Contractor's expense.
9. Trenches shall not be left open overnight or unattended. At the close of each workday the Contractor shall fill or cover trenches with steel plates to the satisfaction of the Engineer.
10. The Contractor shall submit shop drawings for all works to the Engineer. No construction shall be allowed until the shop drawings are approved.
11. The Contractor shall comply with O.S.H.A. Standard 29 CFR – Part 1926.650, .651 and .652 for all excavations.
12. Refuse from demolition shall become the property of the Contractor. It shall be the Contractor's responsibility to dispose of all construction refuse legally.
13. All drainage pipes shall be smooth–interior high density polyethylene corrugated pipe unless noted otherwise. Other types of drainage pipes may be used if so approved by the Engineer under special conditions.
14. Any existing pipes which are not shown on these plans which are currently discharging into existing storm drainage facilities designated for removal shall be reconnected to new drainage structures.
15. The Contractor shall prevent the formation of any low spots where water can collect and any possible redirection of runoff onto private property and shall take whatever corrective measures are necessary. The Contractor is responsible, at no cost to the Owner, to correct any deleterious water ponding areas.
16. Existing valves and manhole covers to remain shall be adjusted to finished grades where required.
17. Existing pavement shall be sawcut in a straight line where it is to be bounded by new pavement.
18. The pavement and subbase thicknesses noted on these plans are after compaction.
19. Fill material shall be free from organic matter, loam and frozen material. Soft or spongy areas after compaction shall be removed, the pocket drained and refilled with select material.
20. All existing site features, including, but not limited to, pavement, curbing, grass, landscaping, piping, utility lines, walls, fencing, and structures, disturbed or damaged by construction shall be restored by the Contractor to a condition equal to or better than those currently existing and as directed by the Engineer.
21. Disturbed grass or earth areas shall be provided with 4 inches minimum of topsoil and seeded or sodded as described in the specifications.

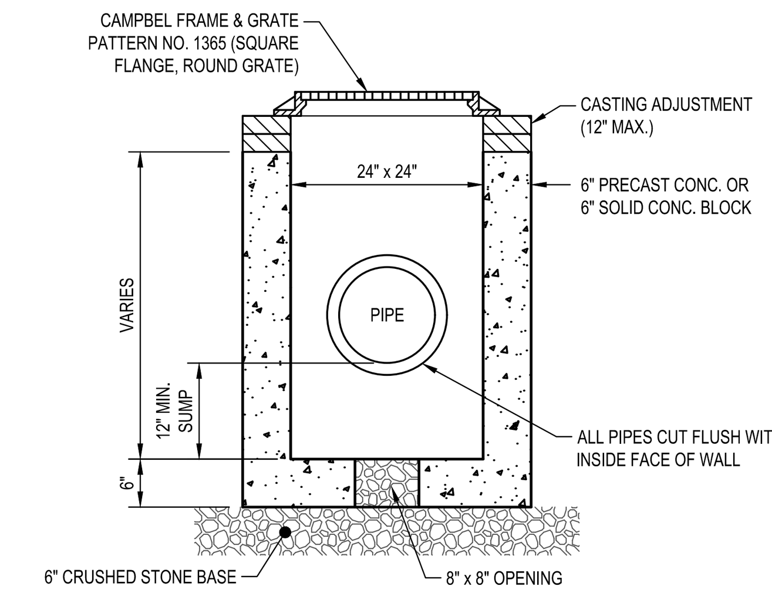


NOTES:

1. CATCH BASINS SHALL MEET REQUIREMENTS FOR H-20 LOADING.
2. CATCH BASIN RIM SHALL BE SET AT AN ELEVATION 1/4" BELOW THE SURROUNDING FINISHED GRADE.
3. LARGER STRUCTURES WITH CONCRETE TOP SLABS ARE REQUIRED WHEN STORM PIPES EXCEED SIZES SHOWN.

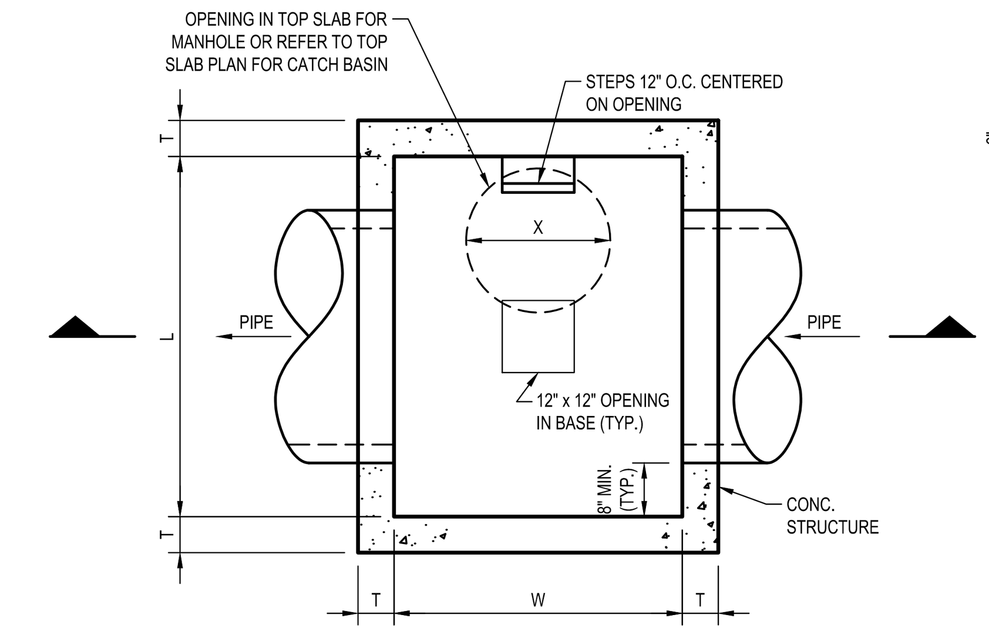
1 STANDARD CATCH BASIN

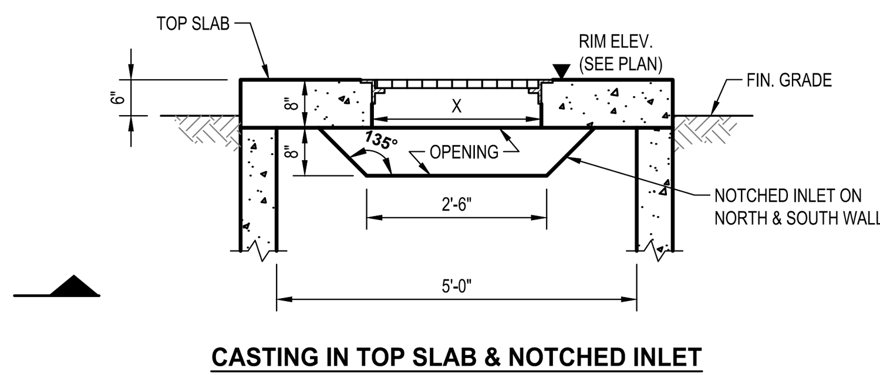
N.T.S.

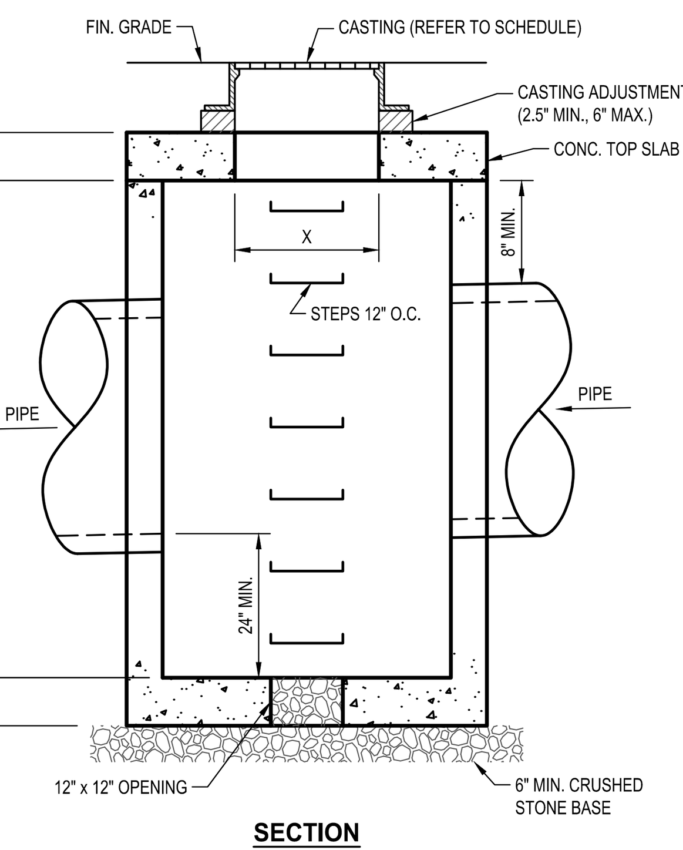


2 DRAINAGE INLET

N.T.S.







DRAINAGE STRUCTURE SCHEDULE							
DRAINAGE STRUCTURE	L	W	D	T	X	CASTING (FRAME & GRATE)	REMARKS
DI #1	3'-0"	5'-0"	5'-10"	6"	24"	CAMPBELL # 1182C*	
DI #2	5'-0"	5'-0"	6'-3"	6"	28¼"	CAMPBELL # 1748* (IN SLAB)	NOTCHED INLET IN NORTH & SOUTH WALLS
DMH #12	7'-6"	5'-0"	10'-0"	8"	24"	CAMPBELL # 1007D*	

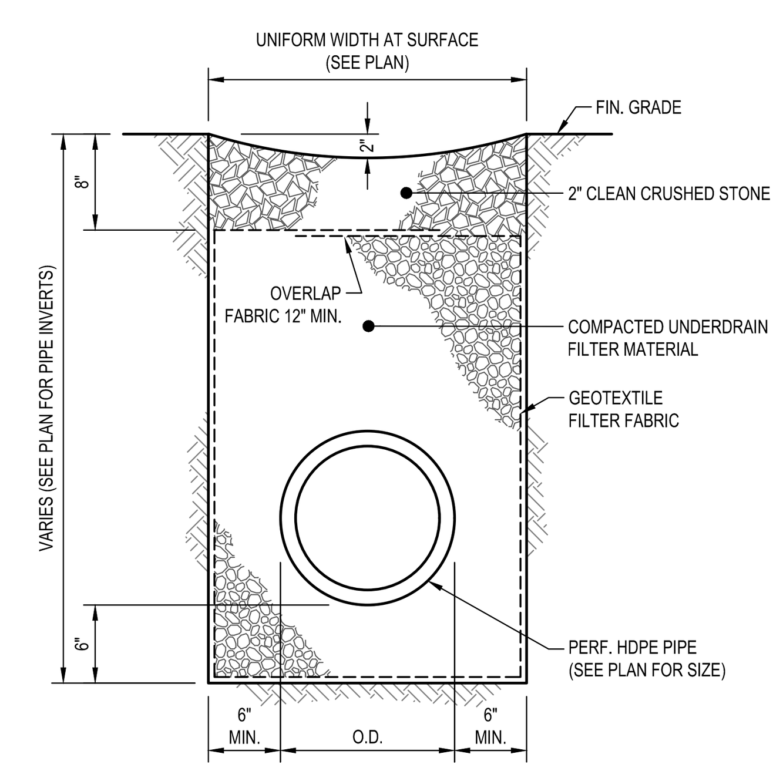
* OR APPROVED EQUAL

NOTES:

1. REFER TO PLAN FOR ACTUAL PIPE SIZES AND ORIENTATIONS.
2. STRUCTURE SHALL MEET REQUIREMENTS FOR H-20 LOADING.
3. ALL PIPES SHALL BE CUT FLUSH TO WALLS.
4. STEPS TO BE PLACED ON UNUSED WALL WHERE POSSIBLE.
5. VERIFY ALL REQUIRED DIMENSIONS IN FIELD.

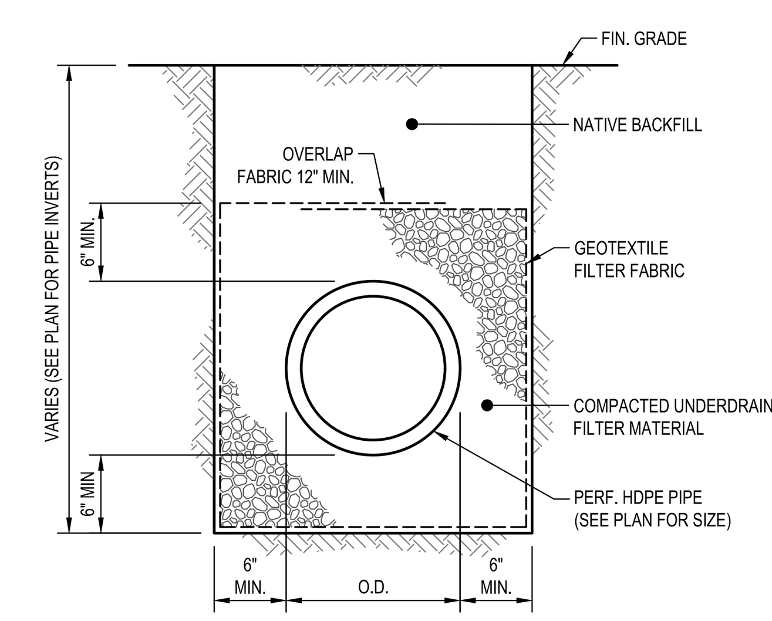
3 DRAINAGE STRUCTURE W/ TOP SLAB

SCALE: 3/8" = 1'-0"



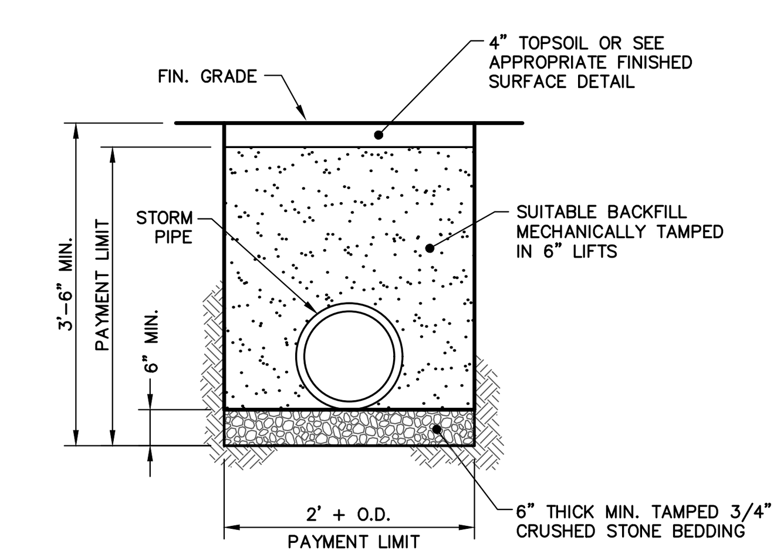
4 FRENCH DRAIN

N.T.S.



5 UNDERDRAIN

N.T.S.

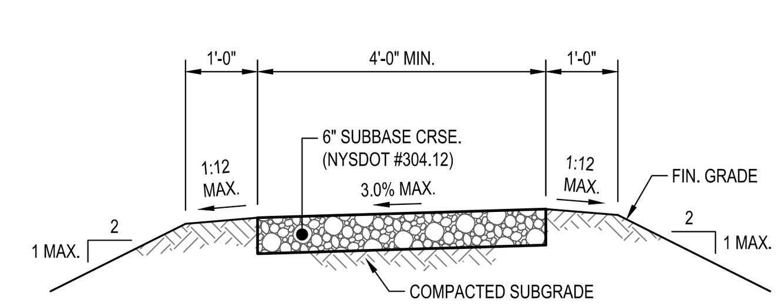


6 STORM DRAIN TRENCH

N.T.S.

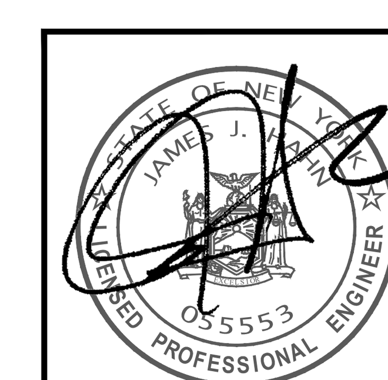
EROSION CONTROL NOTES

1. All erosion control measures downslope of the proposed work area shall be in place prior to the start of construction.
2. Final grades shall be established as quickly as possible and topsoiled and seeded to provide a turf which will stabilize slopes and prevent erosion.
3. Slopes to remain open during construction shall be protected with mulch and staked tobacco netting.
4. Catch basins and drain inlets shall be protected throughout the construction period and until all disturbed areas are thoroughly stabilized.
5. Soil stockpiles shall not be allowed on steep slopes, in drainage swales or in wetland areas. Soil stockpiles shall be surrounded with silt fencing and seeded.
6. Erosion control measures shall be inspected after each rainfall and shall be cleaned, repaired or replaced as required.
7. The Village's wetland consultant, engineer, or a N.Y.S.D.E.C. field representative may require additional erosion control measures if deemed appropriate to mitigate unforeseen siltation and erosion of disturbed soils.



7 TRAIL IMPROVEMENTS

SCALE: 3/8" = 1'-0"



REV.	DATE	DESCRIPTION

TITLE

DETAILS (1)

PROJECT

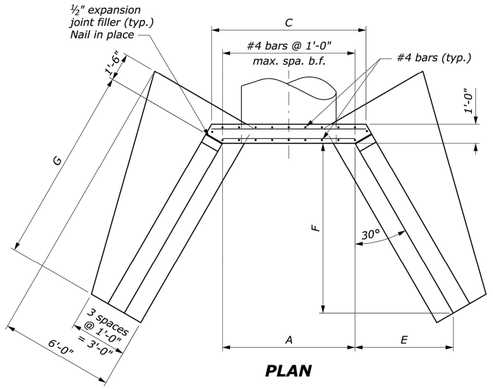
PROPOSED
HILLSIDE PARK
STORM DAMAGE RESTORATION

CHEMKA POOL ROAD

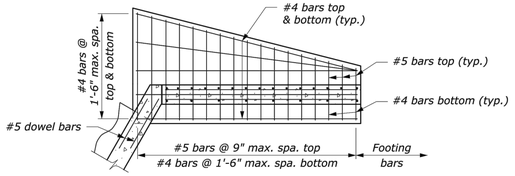
VILLAGE OF HASTINGS-ON-HUDSON, WESTCHESTER COUNTY, NEW YORK

JAMES J. HAHN ENGINEERING, P.C.
Putnam Business Park
1689 Route 22
Brewster, New York 10509
Tel: (845) 279-2220

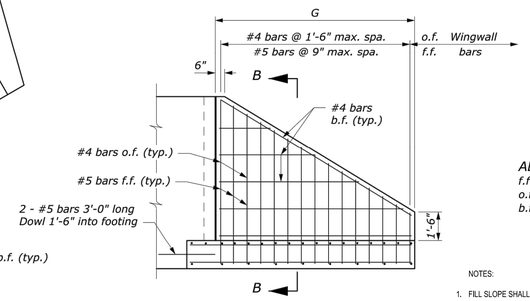
SCALE: AS NOTED
DATE: 6/20/22
DRAWING NO.: C-3



PLAN



WINGWALL PLAN

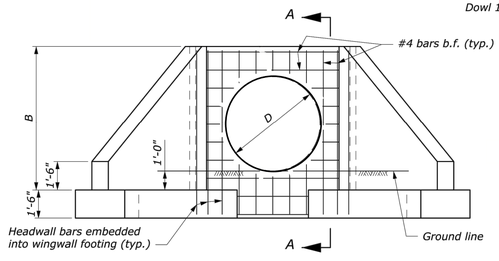


WINGWALL ELEVATION

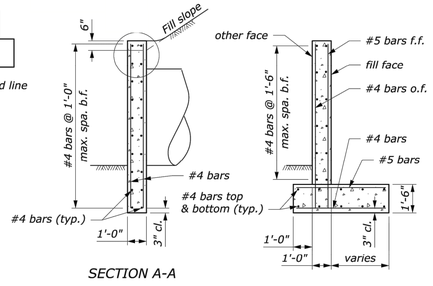
Abbreviations:
f.f. = Fill face
o.f. = Other face
b.f. = Both faces

NOTES:

1. FILL SLOPE SHALL MEET THE TOP OF THE HEADWALL
2. CONCRETE SHALL CONFORM TO SECTION 601, CHAMFER ALL EXPOSED EDGES 3/4" AND FINISH ALL EXPOSED SURFACES WITH A CLASS 1 ORDINARY SURFACE FINISH. JOINT FILLER SHALL CONFORM TO AASHTO M213.
3. REINFORCING STEEL CLEARANCE IS 2 INCHES UNLESS SHOWN OTHERWISE.



FRONT ELEVATION
(Showing headwall reinforcement)

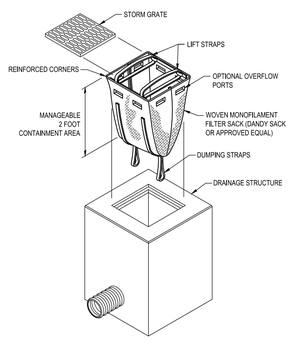


SECTION A-A

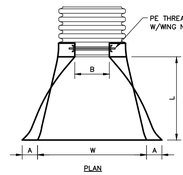
SECTION B-B

SCHEDULE							
HEADWALL #	A	B	C	D	E	F	G
11	6'-0"	6'-5½"	7'-1½"	48"	5'-9"	9'-11½"	11'-6½"

1 CONCRETE HEADWALL
N.T.S.



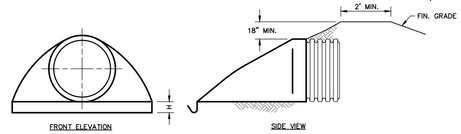
8 FILTER SACK INLET PROTECTION
N.T.S.



PLAN

PIPE SIZE	A	B (MAX.)	H	L	W
12"	6.5"	10"	6.5"	25"	29"
15"	6.5"	10"	6.5"	25"	29"
18"	7.5"	15"	6.5"	32"	35"
24"	7.5"	18"	6.5"	36"	45"
30"	10.5"	N/A	7.0"	58"	68"
36"	10.5"	N/A	7.0"	58"	68"

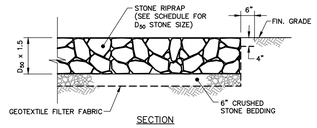
NOTE: PE THREADED ROD W/WING NUTS PROVIDED FOR END SECTIONS 12"~24" (30" & 36" END SECTIONS TO BE WELDED TO PIPE PER MANUFACTURER'S RECOMMENDATIONS).



FRONT ELEVATION SIDE VIEW

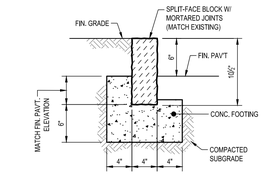
2 FLARED H.D.P.E END SECTION
N.T.S.

SCHEDULE		
LOCATION	D_{50}	REMARKS
END SECTION #10	12"	
HEADWALL #11	12"	



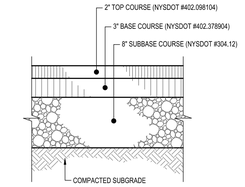
SECTION

3 STONE RIPRAP STABILIZATION
N.T.S.



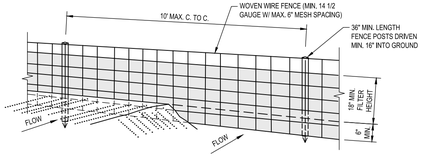
SECTION

4 BELGIAN BLOCK CURB
N.T.S.

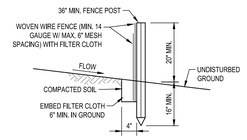


SECTION

5 PARKNG AREA PAVEMENT
N.T.S.



PERSPECTIVE VIEW

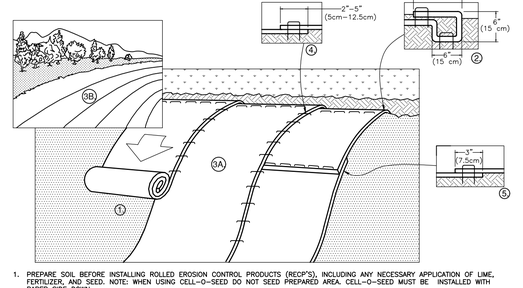


SECTION VIEW

CONSTRUCTION SPECIFICATIONS

1. WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES. POSTS SHALL BE STEEL EITHER "T" OR "U" TYPE OR HARDWOOD.
2. FILTER CLOTH TO BE TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID-SECTION. FENCE SHALL BE WOVEN WIRE, 6" MAXIMUM MESH OPENING.
3. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVERLAPPED BY SIX INCHES AND FOLDED. FILTER CLOTH SHALL BE EITHER FILTER X, MIRAFI 100X, STABILINKA T140N, OR APPROVED EQUIVALENT.
4. PREFABRICATED UNITS SHALL MEET THE MINIMUM REQUIREMENTS SHOWN.
5. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.

6 REINFORCED SILT FENCE
N.T.S.



1. PREPARE SOIL BEFORE INSTALLING ROLLED EROSION CONTROL PRODUCTS (RECP'S), 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.
2. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE RECP'S IN A 6" (15 CM) DEEP X 6" (15 CM) WIDE TRENCH WITH APPROXIMATELY 12" (30cm) OF RECP'S EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE RECP'S WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" (30 CM) APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" (30 CM) 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" (30 CM) 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" (5 CM – 12.5 CM) 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" (7.5 CM) OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" (30 CM) APART ACROSS ENTIRE RECP'S WIDTH. NOTE: IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" (15 CM) MAY BE NECESSARY TO PROPERLY SECURE THE RECP'S.

7 EROSION CONTROL BLANKET INSTALLATION
N.T.S.

REV.	DATE	DESCRIPTION

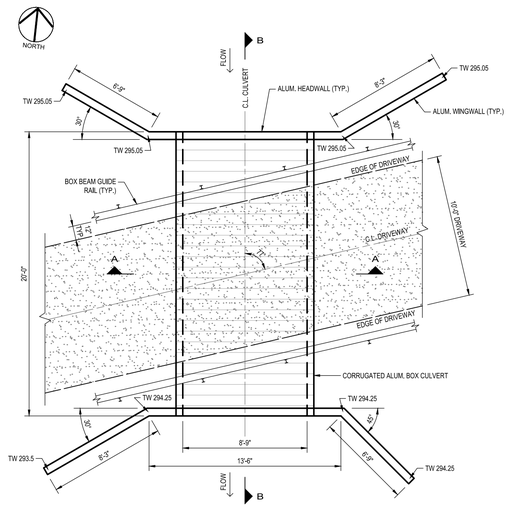
TITLE: **DETAILS (2)**

PROJECT:
PROPOSED HILLSIDE PARK STORM DAMAGE RESTORATION

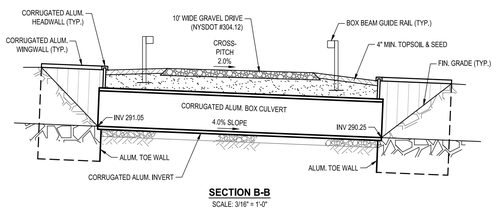
CHEMKA POOL ROAD
VILLAGE OF HASTINGS-ON-HUDSON, WESTCHESTER COUNTY, NEW YORK

JAMES J. HAHN ENGINEERING, P.C.
Putnam Business Park
1689 Route 22
Brewster, New York 10509
Tel: (845) 279-2220

SCALE	DATE
AS NOTED	6/20/22
DRAWING NO.	SHEET NO.
C-4	4 OF 5



PLAN VIEW
SCALE: 3/16" = 1'-0"

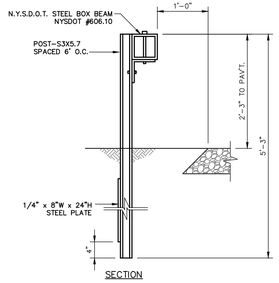


SECTION B-B
SCALE: 3/16" = 1'-0"

NOTES:

1. ALUMINUM BOX CULVERT TO BE STRUCTURE 1, MANUFACTURED BY CONTECH ENGINEERED SOLUTIONS.
2. CORRUGATED ALUMINUM INVERT PLATE, TOE PLATE, HEADWALLS, WINGWALLS, ANCHOR RODS, AND DEADMAN ANCHORS SHALL BE INSTALLED PER THE CULVERT MANUFACTURER'S REQUIREMENTS.
3. BACKFILLING MATERIALS AND PROCEDURES SHALL BE PER THE CULVERT MANUFACTURER'S REQUIREMENTS.
4. SHOP DRAWINGS OF THE CULVERT, HEADWALLS, WINGWALLS, AND ANCHORS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR TO MANUFACTURE.

NOTE:
BOX BEAM INSTALLATION, INCLUDING END FLARES, END ASSEMBLIES, AND ANCHORS SHALL CONFORM TO N.Y.S.D.O.T. STANDARD SHEETS 606-04.



SECTION

2 BOX BEAM
N.T.S.

SECTION A-A
SCALE: 1/2" = 1'-0"

1 ALUMINUM BOX CULVERT

REV.	DATE	DESCRIPTION

TITLE: **DETAILS (3)**

PROJECT:
PROPOSED
HILLSIDE PARK
STORM DAMAGE RESTORATION

CHEMKA POOL ROAD
VILLAGE OF HASTINGS-ON-HUDSON, WESTCHESTER COUNTY, NEW YORK

JAMES J. HAHN ENGINEERING, P.C.
Putnam Business Park
1689 Route 22
Brewster, New York 10509
Tel: (845) 279-2220

SCALE	DATE
AS NOTED	6/20/22
DRAWING NO.	SHEET NO.
C-5	5 OF 5