

**LOCUS MAP**  
SCALE: AS SHOWN

**GENERAL NOTES:**

- EMBANKMENT SLOPES AND ALL DISTURBED AREAS ARE TO RECEIVE 4" OF TOPSOIL AND GRASS SEED UNLESS OTHERWISE NOTED.
- ALL EXCAVATION AND PLACEMENT OF FILL SHALL BE IN ACCORDANCE WITH R.I.D.O.T. STANDARD SPECIFICATIONS SECTION 202.
- THE CONTRACTOR SHALL VERIFY THE LOCATIONS OF ALL EXISTING DRAINAGE AND UTILITIES, BOTH UNDERGROUND AND OVERHEAD BEFORE EXCAVATION BEGINS IN ACCORDANCE WITH 'DIG SAFE'. NO DRAINAGE STRUCTURE OR FACILITY SHALL BE DISTURBED WITHOUT PROPER PERMITS UNLESS SPECIFICALLY INDICATED ON THESE DRAWINGS. ANY DAMAGE TO EXISTING UTILITIES SHALL BE THE CONTRACTOR'S RESPONSIBILITY.
- SPECIFICATIONS & DETAILS TO GOVERN THIS PROJECT ARE THE RHODE ISLAND STANDARD SPECIFICATIONS FOR ROAD & BRIDGE CONSTRUCTION 2004 EDITION & TOWN OF WEST WARWICK STANDARDS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL MAINTENANCE AND PROTECTION OF PEDESTRIAN AND VEHICULAR TRAFFIC INCLUDING POLICE PROTECTION. ALL TRAFFIC CONTROL SHALL CONFORM TO THE MANUAL FOR UNIFORM TRAFFIC CONTROL DEVICES 2003 INCLUDING ALL REVISIONS.
- ALL REQUIRED AUTHORIZATION/PERMITS TO PERFORM WORK MUST BE OBTAINED BY THE CONTRACTOR PRIOR TO CONSTRUCTION.
- EXISTING UTILITIES HAVE BEEN PLOTTED BASED UPON BEST AVAILABLE INFORMATION AND REPRESENT APPROXIMATE LOCATIONS. THIS DRAWING SHOULD NOT BE RELIED ON WHEN PERFORMING SUBSURFACE EXCAVATIONS. DAMAGE CAUSED TO EXISTING UTILITIES IS THE RESPONSIBILITY OF THE CONTRACTOR ONLY.
- THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ANY CONSTRUCTION OPERATIONS INCLUDING ALL ACTIONS OR OMISSIONS OF ANY SUBCONTRACTORS, AGENTS OR EMPLOYEES. THE CONTRACTOR MUST ENSURE THAT THE CONDITIONS OF ALL PERMITS, SPECIFICATIONS AND FEDERAL, STATE AND LOCAL REGULATIONS ARE STRICTLY ENFORCED. THE CONTRACTOR IS ALSO RESPONSIBLE FOR ALL ASPECTS OF ON-SITE SAFETY, INCLUDING ANY DAMAGE TO EXISTING STRUCTURES.
- ALL DISTURBED AREAS/STRUCTURES SHALL BE REPLACED IN KIND UNLESS OTHERWISE SHOWN.
- WORK SHOWN ON THE PLANS FOR WHICH THERE ARE NO PARTICULAR DETAILS OR SPECIFICATIONS DOES NOT RELIEVE THE CONTRACTOR FROM FURNISHING AND INSTALLING THE WORK. THE CONTRACTOR SHALL THOROUGHLY EXAMINE THE CONTRACT DOCUMENTS AND PLANS AND INSPECT THE SITE, AND THE BID PRICE SHALL INCLUDE ALL SERVICES AND MATERIALS NECESSARY TO COMPLETE THE PROJECT. ANY CHANGES TO THE PROJECT OR THE INSTALLATION OF AN ITEM FOR WHICH NO PARTICULAR DETAIL OR SPECIFICATION WAS PROVIDED MUST BE REVIEWED BY AND MUST BE ACCEPTABLE TO THE ENGINEER.
- ALL ELEVATIONS ARE BASED ON MEAN SEA LEVEL DATUM.
- THE CONTRACTOR SHALL INSTALL ALL HAY BALES & SEDIMENT CONTROL DEVICES IN ACCORDANCE WITH RIDEM & TOWN STANDARDS PRIOR TO ANY CONSTRUCTION.
- COMMUNICATION LINES (ELECTRIC, TELEPHONE, AND CABLE TV) SHALL BE INSTALLED UNDERGROUND UNLESS APPROVED BY THE TOWN.
- THIS SITE IS SITUATED IN ZONE C (AREAS OUTSIDE THE 100 YEAR FLOODPLAIN) ON FEMA MAP 440007 0002 B, REVISED APRIL 15, 1986 FOR THE TOWN OF WEST WARWICK, RI.
- ALL CONSTRUCTION SHALL BE PERFORMED IN THE DRY. THE CONTRACTOR SHALL PROVIDE, OPERATE AND MAINTAIN ALL PUMPS, DRAINS, WELL POINTS AND OTHER FACILITIES NECESSARY TO CONTROL, COLLECT AND DISPOSE SURFACE AND SUBSURFACE WATER ENCOUNTERED DURING CONSTRUCTION.
- THE LIMIT OF DISTURBANCE SHALL BE LOCATED BY A R.I. PLS PRIOR TO CONSTRUCTION. NO CLEARING OR DISTURBANCE SHALL TAKE PLACE OUTSIDE THE LIMIT OF DISTURBANCE. THE AREA OUTSIDE THE LIMIT OF DISTURBANCE SHALL BE KEPT TOTALLY UNDISTURBED.
- ALL ROOT SYSTEMS, TREES, STUMPS, BUSHES, BOULDERS AND OTHER OBJECTIONABLE MATERIAL SHALL BE REMOVED AND TRANSPORTED AWAY FROM THE PROJECT SITE, UNLESS OTHERWISE APPROVED BY THE TOWN.
- THE CONTRACTOR SHALL ADHERE TO ALL PERMITS WHICH INCLUDE AT LEAST RIDEM WETLANDS.
- ALL ROAD DRAINAGE SHALL REMAIN ON THE ROAD AND NOT BE DIRECTED INTO THE SUBJECT PROPERTY. A BITUMINOUS BERM SHALL BE CONSTRUCTED ALONG THE ROADWAY EDGE WHERE REQUIRED.
- ONLY PLANS ENTITLED 'ISSUED FOR CONSTRUCTION' SHALL BE USED AT THE JOB SITE BY THE CONTRACTOR.
- ALL DRAINAGE CLEAN OUTS SHALL BE BROUGHT TO FINISH GRADE. WHEN LOCATED IN PAVED AREAS, CLEAN OUTS SHALL BE PROVIDED WITH A HEAVY DUTY CAST IRON FRAME & COVER.

**SEQUENCE AND STAGING OF LAND DISTURBING ACTIVITIES:**

- SURVEY AND STAKE LIMIT OF DISTURBANCE FOR PLACEMENT OF SEDIMENTATION CONTROL DEVICES.
- PLACE SEDIMENTATION CONTROL DEVICES (HAYBALE OR SILT FENCE) AS SHOWN ON THE PLANS AND STAKED OUT IN THE FIELD. IN NO CASE IS THE LIMIT OF WORK TO EXCEED BEYOND THE SEDIMENTATION CONTROL DEVICES. CONSTRUCT CONSTRUCTION ENTRANCE DEVICE 9.9.0.
- CLEAR AND GRUB SITE.
- BEGIN CONSTRUCTION OF BUILDING AND PARKING AREA (EXCAVATING AND GRADING, ETC.). TOPSOIL TO BE STRIPPED AND STOCKPILED IN APPROVED AREAS. THE STOCKPILES ARE TO BE PROTECTED BY A ROW OF SEDIMENTATION DEVICES.
- CONSTRUCT UTILITIES AND DRAINAGE SYSTEMS.
- PREPARE PARKING AREAS & PAVE FIRST COURSE.
- INSTALL PLANTING ON LANDSCAPE PLAN.
- PLACE SECOND COURSE OF PAVEMENT.
- REMOVE TEMPORARY EROSION AND SEDIMENT CONTROL DEVICES.

# JBACH REALTY, LLC

## Development

WEST WARWICK INDUSTRIAL PARK  
CRUDALE DRIVE  
WEST WARWICK, RHODE ISLAND

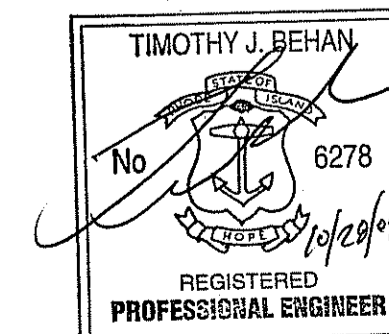
**EROSION CONTROL & SOIL STABILIZATION PROGRAM:**

- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE STANDARDS AND PROCEDURES SET FORTH IN THE WEST WARWICK SOIL EROSION AND SEDIMENT CONTROL ORDINANCE.
  - EXTREME CARE SHALL BE EXERCISED AS AS TO PREVENT ANY MATERIALS FROM ENTERING WETLANDS, THE ROADWAYS, ROADWAY DRAINAGE SYSTEMS, AND ADJACENT PROPERTY.
  - STAKED HAY BALES OR SILT FENCE SHALL BE INSTALLED WHERE SHOWN ON THE PLAN AND AS REQUIRED TO PREVENT SEDIMENTATION ONTO ADJACENT PROPERTIES, WETLANDS AND THE ROADWAY DRAINAGE SYSTEM.
  - DENUDED SLOPES SHALL NOT BE UNATTENDED OR EXPOSED FOR EXCESSIVE PERIODS OF TIME SUCH AS THE INACTIVE WINTER SEASON.
  - ALL DISTURBED SLOPES, EITHER NEWLY CREATED OR EXPOSED PRIOR TO OCTOBER 15 SHALL BE SEEDED OR PROTECTED BY THAT DATE.
- SEED MIX:**
- |                              |                     |
|------------------------------|---------------------|
| RED FESCUE                   | 1.75 LBS/1,000 S.F. |
| COLONIAL BENT GRASS 'EXETER' | 0.11 LBS/1,000 S.F. |
| PERENIAL RYE GRASS           | 0.11 LBS/1,000 S.F. |
| BIRDFOOT TREFOLI 'EMPIRE'    | 0.35 LBS/1,000 S.F. |
- TEMPORARY TREATMENTS SHALL CONSIST OF HAY, STRAW OR FIBER MULCH OR PROTECTIVE COVERS, SUCH AS A MAT OR FIBER LINING (BURLAP, JUTE, FIBERGLASS NETTING, EXCELSIOR BLANKETS). THEY SHALL BE INCORPORATED INTO THE WORK AS WARRANTED OR AS ORDERED BY THE TOWN, ENGINEER OR OWNER AT NO ADDITIONAL COST.
  - HAY OR STRAW APPLICATIONS SHALL BE IN THE AMOUNT OF 3,000-4,000 LBS/ACRE.
  - ALL NEW HAY BALES OR TEMPORARY PROTECTION SHALL REMAIN IN PLACE UNTIL AN ACCEPTABLE STAND OF GRASS OR APPROVED GROUND COVER IS ESTABLISHED AND POTENTIAL SEDIMENTATION SOURCES ARE REMOVED.
  - STOCKPILES SHALL HAVE NO SLOPE GREATER THAN 2:1 AND SHALL BE SURROUNDED BY STAKED HAY BALES OR SILT FENCE. STOCKPILES EXPOSED FOR EXCESSIVE PERIODS OF TIME SHALL RECEIVE TEMPORARY TREATMENT CONSISTING OF HAY, STRAW OR FIBER MATTING.
  - DURING CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL EROSION CONTROL MAINTENANCE AND SHALL INSPECT/REPLACE AS NEEDED.
  - ADDITIONAL HAY BALES/SILT FENCE OR OTHER TREATMENTS SHALL BE PROVIDED AS DIRECTED BY ENGINEER, RIDEM OR LOCAL REPRESENTATIVES AT NO ADDITIONAL COST.
  - THE CONTRACTOR SHALL REFERENCE THE "RI EROSION AND SEDIMENT CONTROL HANDBOOK" AS PREPARED BY THE US DEPT. OF AGRICULTURE, SOIL CONSERVATION SERVICE, 1989, (AS REVISED) AS A GUIDE.
  - THE CONTRACTOR SHALL INSPECT THE SOIL EROSION CONTROL DEVICES AFTER EVERY RAIN STORM EVENT. ANY SOIL MIGRATION PAST THE DEVICES SHALL BE REMOVED AND THE SOIL EROSION CONTROL DEVICES SHALL BE RE-ESTABLISHED TO PREVENT SOIL EROSION. ALL ACCUMULATED SEDIMENT IN FRONT OF THE DEVICES SHALL BE REMOVED AFTER EVERY RAIN STORM EVENT.
  - ALL DISTURBED SOIL AREAS SHALL BE PROTECTED AGAINST SOIL EROSION BY PLACEMENT OF HAY BALES AND/OR SILT FENCE ON THE DOWN GRADIENT SIDE OF THE DISTURBED AREA(S). SHOULD THE VOLUME AND/OR RATE OF STORMWATER RUNOFF BE TOO GREAT FOR A SINGLE DEVICE, THEN MULTIPLE DEVICES ARE REQUIRED SUCH AS SILT FENCE BACKED-UP WITH HAYBALES.
  - CATCH BASIN GRATES SHALL BE PROTECTED AGAINST SOIL MIGRATION INTO THE GRATES BY USE OF DETAIL 9.8.0.
  - AT THE END OF THE PROJECT ALL SEDIMENT IN THE CATCHBASIN SUMPS SHALL BE REMOVED.

**DRAINAGE SYSTEM - INSPECTION, MAINTENANCE AND REPAIR:**

- THE SUBJECT PROPERTY OWNER SHALL MAINTAIN THE PROPOSED DRAINAGE SYSTEM COMPONENTS WHICH INCLUDE DRAIN MANHOLES, PIPING, TRENCH DRAINS, PAVED WATERWAYS, WATER QUALITY PONDS AND SUBSURFACE ROOF-TOP DETENTION SYSTEMS.
  - THE DRAINAGE SYSTEM SHOULD BE INSPECTED TWICE PER YEAR BY AN INDIVIDUAL IN THE OFFICE OF WATER RESOURCES AS SPECIFIED IN THE LETTER OF APPROVAL.
- DRAIN MANHOLES, PAVED WATERWAYS, AND TRENCH DRAINS:**
- REMOVE TRASH AND LITTER.
  - REPAIR ALL STRUCTURAL DEFECTS IMMEDIATELY.
- PIPES & OUTLETS:**
- ALL CLOGGED OR SEDIMENT FILLED PIPES WHICH ARE NOT FULLY SEDIMENT FILLED SHALL BE CLEANED OUT IMMEDIATELY. WHEN CLEANING OUT PIPES, ENSURE DOWNSTREAM AREAS ARE PROTECTED FROM SEDIMENT DISCHARGES.
  - REMOVE TRASH AND LITTER.
  - INSPECT OUTLET RIP RAP AREAS. REPAIR ALL ERODED AREAS BY SUPPLEMENTING WITH MORE RIP RAP AND ESTABLISHING NEW VEGETATIVE GROWTH.
- WATER QUALITY PONDS:**
- INSPECT THE OUTLET CONTROL STRUCTURE IN POND #2 TO ENSURE ALL OPENINGS ARE FREE OF DEBRIS AND ARE FUNCTIONING PROPERLY. MAKE ALL NECESSARY REPAIRS. INSPECT WATER QUALITY VOLUME ORIFICE AND OUTLET PIPES TO ENSURE THEY ARE OPERATING PROPERLY. MAKE NECESSARY REPAIRS IMMEDIATELY.
  - INSPECT ALL SLOPES IN POND AREA. STABILIZE ERODED AREAS BY REGRADING AND ESTABLISHING NEW VEGETATIVE GROWTH.
  - MOW ENTIRE POND & EMBANKMENTS AT LEAST ONCE PER YEAR (GENERALLY AFTER AUGUST 15).
  - REMOVE ALL TRASH AND LITTER.
  - RIP RAP AREAS SHALL BE INSPECTED FOR EROSION. RESTORE AREAS BY REGRADING AND REPAIRING THE RIP RAP AREAS.
  - THE GRASSED AREAS OF THE POND SHOULD BE INSPECTED TWO TIMES PER YEAR TO CHECK FOR EROSION PROBLEMS. PROBLEM AREAS SHOULD BE SEEDED IMMEDIATELY TO STABILIZE EXPOSED SOILS, THEREBY PREVENTING EROSION AND POTENTIAL CLOGGING OF OUTLET DEVICES.
  - IF STANDING WATER IS FOUND IN THE POND MORE THAN 3 DAYS AFTER A RAINFALL EVENT, THE POND SHALL BE DETERMINED TO BE FAILED, AND THE OWNER SHALL BE RESPONSIBLE TO HAVE THE POND INSPECTED BY A R.I. REGISTERED PROFESSIONAL ENGINEER AND REPAIRED/REPLACED IMMEDIATELY.
- SUBSURFACE ROOF-TOP DETENTION SYSTEM:**
- OPEN RISER MANHOLE OVER SYSTEM AND OBSERVE THAT THE PIPELINE DRAINS WITHIN 72 HOURS AFTER RAINSTORM EVENTS.
  - INSPECT SYSTEM TO ENSURE THE STORAGE PIPES DO NOT HAVE DEBRIS AND/OR EXCESS SEDIMENTS. CLEAN OUT STORAGE PIPES WHEN SEDIMENT ACCUMULATION EXCEEDS 10% VOLUME.
  - INSPECT ORIFICE OUTLET TO ENSURE IT IS NOT CLOGGED.
  - REPAIR ANY STRUCTURAL DEFECTS IMMEDIATELY.

SHEET#	PLAN TITLE
1	COVER SHEET
2	EXISTING CONDITIONS PLAN
3	PROPOSED PLAN
4	SOIL EROSION PLAN
5	DETAILS-1
6	DETAILS-2
7	DETAILS-3



RIDEM WETLAND PERMIT SET

RECEIVED  
OCT 28 2008

Being Assessors Plat No. 30 Lot No. 50  
COVER SHEET  
JBACH REALTY LLC

LOCATION  
West Warwick Industrial Park  
Crudale Dr. & James P. Murphy Hwy.  
West Warwick, Rhode Island 02893

PREPARED FOR  
Henry DiPietro  
14 Clover Drive  
Coveney, Rhode Island 02816

Checked By: T.J.B.  
AS SHOWN

Drawn By: T.J.B.  
DATE: JUNE 2008

NO.	REVISIONS	DATE
1	REVISION	12/24/08
2	REVISION	07/27/08

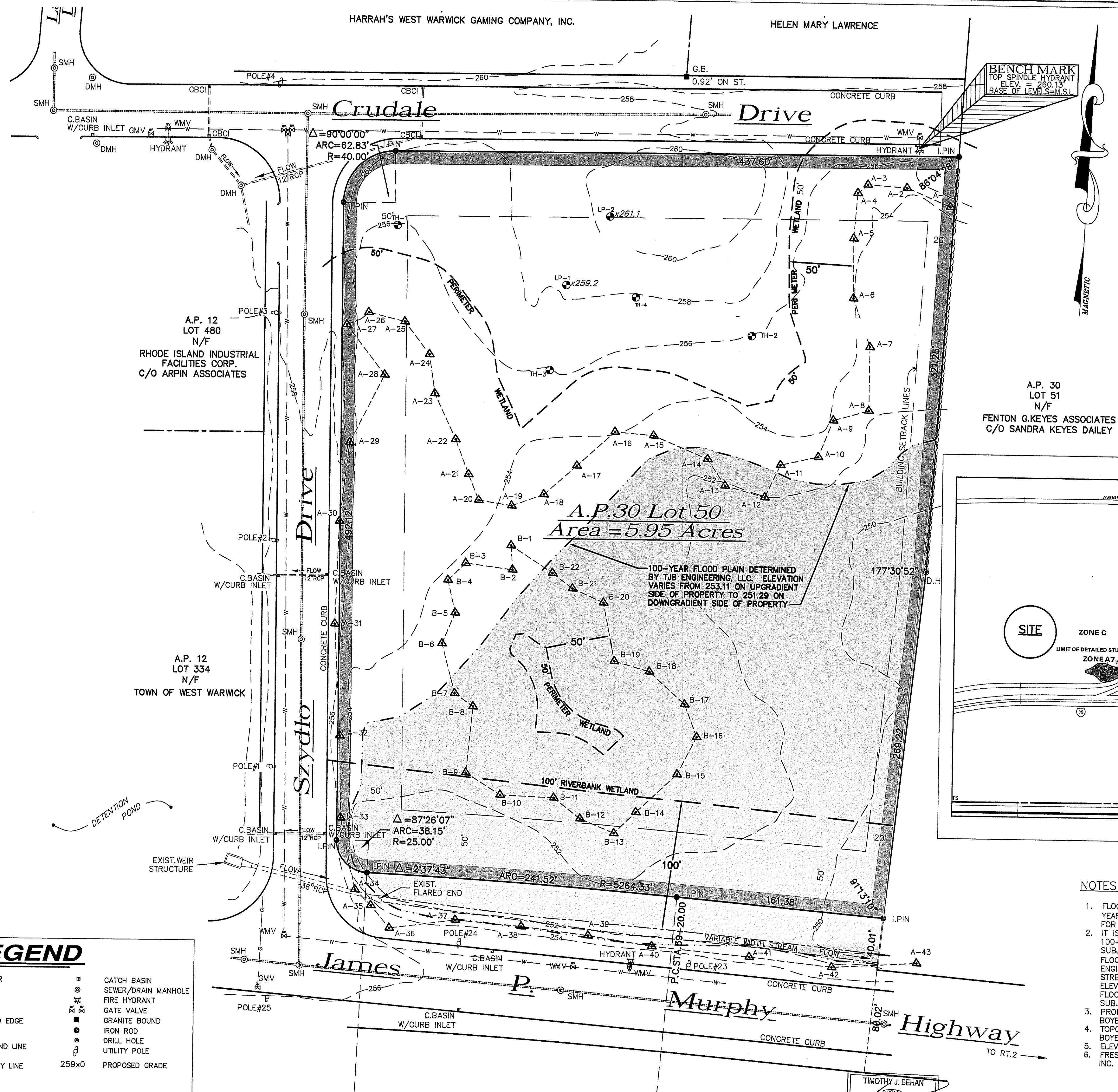
**TJB ENGINEERING, LLC**  
CIVIL ENGINEERING  
PERMITTING & LAND PLANNING  
SUBDIVISIONS \* WASTEWATER

1050 MAIN STREET SUITE 30  
EAST GREENWICH, RI 02818  
PHONE: 401-996-1677

**BOYER ASSOCIATES**  
REGISTERED PROFESSIONAL ENGINEERS

1200 MAIN STREET  
WEST WARWICK, RI 02893  
TEL: (401)821-8872 FAX (401)826-1993

Sheet **1**  
of **7** sheets

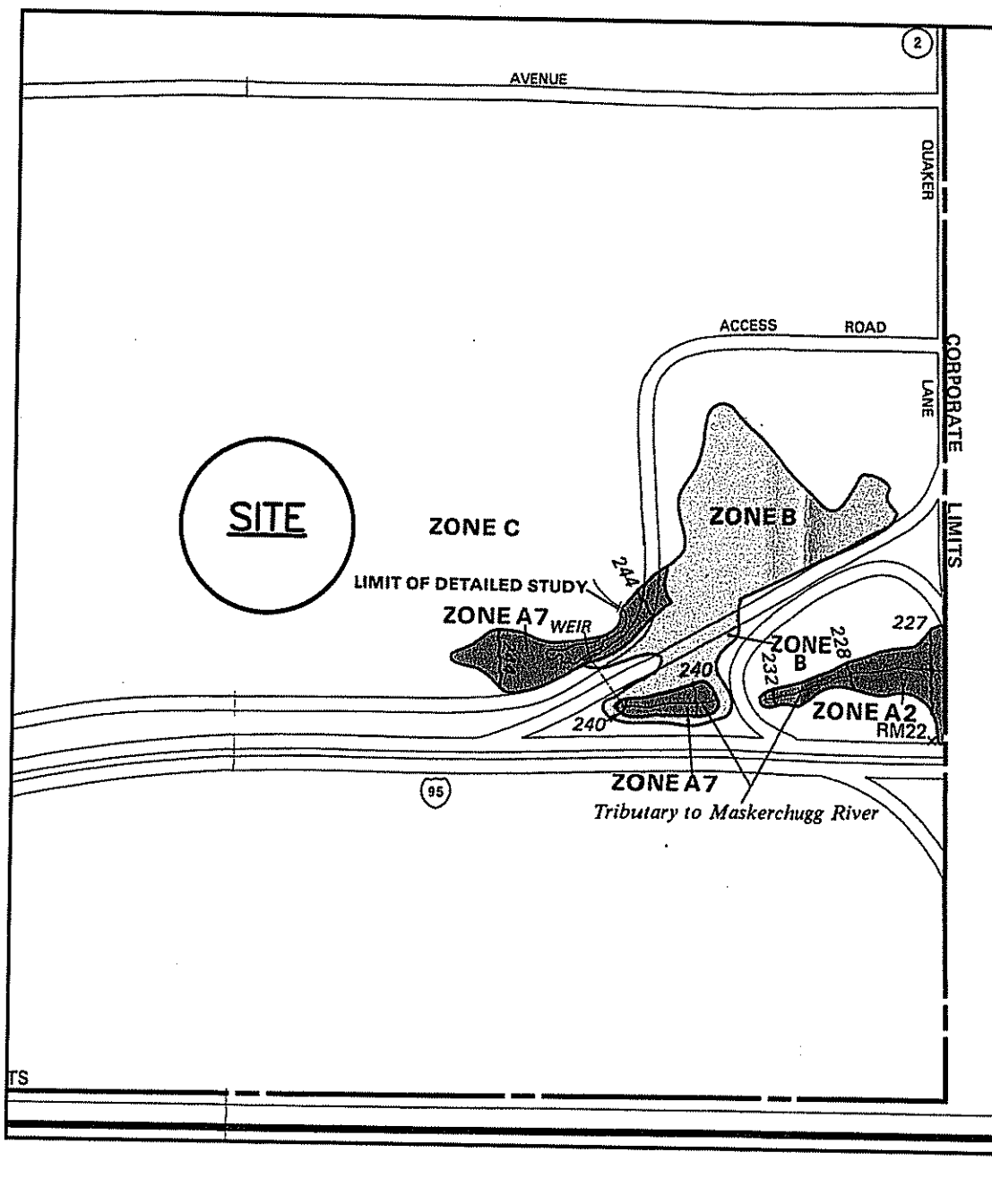


**EXISTING CONDITIONS PLAN**

SCALE: 1"=40'

TIMOTHY J. BEHAN  
REGISTERED PROFESSIONAL ENGINEER  
No. 6278  
Date: 10/21/08

RIDEM WETLAND PERMIT SET

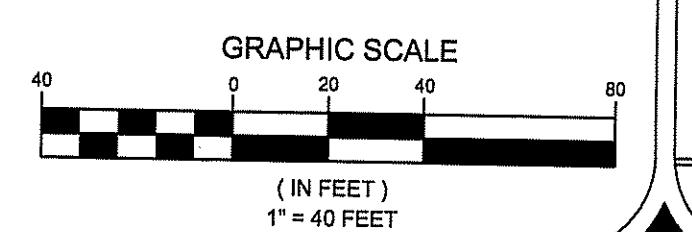


NATIONAL FLOOD INSURANCE PROGRAM  
**FIRM FLOOD INSURANCE RATE MAP**  
TOWN OF WEST WARWICK, RHODE ISLAND  
KENT COUNTY  
FIRM PANEL 2 OF 2  
SEE MAP INDEX FOR PANELS NOT PRINTED  
COMMUNITY PANEL NUMBER 44007 0002 B  
MAP REVISED: APRIL 15, 1986  
Federal Emergency Management Agency

AS SPECIFIED IN THE LETTER OF APPROVAL  
DATED OCT 31 2008 FILE # 08-0339  
NO CHANGES ALLOWED WITHOUT PRIOR APPROVED  
APPROVED PLANS MUST BE AT CONSTRUCTION

**NOTES:**

1. FLOOD ZONE: THIS SITE IS SITUATED IN ZONE C (AREA'S OUTSIDE THE 100-YEAR FLOODPLAIN) ON FEMA MAP 440007 0002 B, REVISED APRIL 15, 1986 FOR THE TOWN OF WEST WARWICK, RI.
2. IT IS UNDERSTOOD THAT ALL FLOWING BODIES OF WATER HAVE ASSOCIATED 100-YEAR FLOOD PLAINS INCLUDING THE PERENNIAL STREAM LOCATED ON SUBJECT PROPERTY. FEMA HAS DETERMINED THE PERENNIAL STREAM 100-YEAR FLOOD ELEVATION OF THE PERENNIAL STREAM TO BE 244' (MSL). TJB ENGINEERING, LLC HAS DETERMINED THE 100-YEAR FLOOD ELEVATION OF THE STREAM ON THE SUBJECT PROPERTY TO HAVE A HIGHEST 100-YR FLOOD ELEV. = 253.11, REFER TO EXISTING CONDITIONS PLAN WHICH SHOWS THE FLOOD PLAN ASSOCIATED WITH THE STREAM SINCE THE ELEVATION VARIES ON SUBJECT PROPERTY.
3. PROPERTY LINE INFORMATION TAKEN FROM A CLASS I SURVEY PERFORMED BY BOYER ASSOCIATES.
4. TOPOGRAPHY INFORMATION TAKEN FROM A CLASS III SURVEY PERFORMED BY BOYER ASSOCIATES.
5. ELEVATIONS BASED ON MEAN SEA LEVEL.
6. FRESHWATER WETLAND EDGES DETERMINED BY NATURAL RESOURCE SERVICES, INC.



**LEGEND**

-254-	EXISTING CONTOUR	□	CATCH BASIN
- - -	DRAINAGE LINE	⊗	SEWER/DRAIN MANHOLE
- - -	WATER LINE	⊕	FIRE HYDRANT
- - -	GAS LINE	⊙	GATE VALVE
▲	FLAGGED WETLAND EDGE	⊗	GRANITE BOUND
- - -	PERIMETER WETLAND LINE	⊙	IRON ROD
- - -	CURB LINE	⊙	DRILL HOLE
- - -	EXISTING PROPERTY LINE	⊙	UTILITY POLE
- - -	SEWER LINE	⊙	PROPOSED GRADE
- - -	ROOF DRAIN LINE	⊙	
- - -	STONE WALL	⊙	
- - -	SILT FENCE & LIMIT OF DISTURBANCE	⊙	
- - -	LIMIT OF DISTURBANCE	⊙	

Being Assessors Plat No. 30, Lot No. 50  
**EXISTING CONDITIONS PLAN**  
**JBACH REALTY LLC**  
LOCATION  
West Warwick Industrial Park  
Crudale Dr. Szydto Dr. & James P. Murphy Hwy.  
West Warwick, Rhode Island 02893  
PREPARED FOR  
**Henry DiPietro**  
14 Clover Drive  
Coventry, Rhode Island 02816

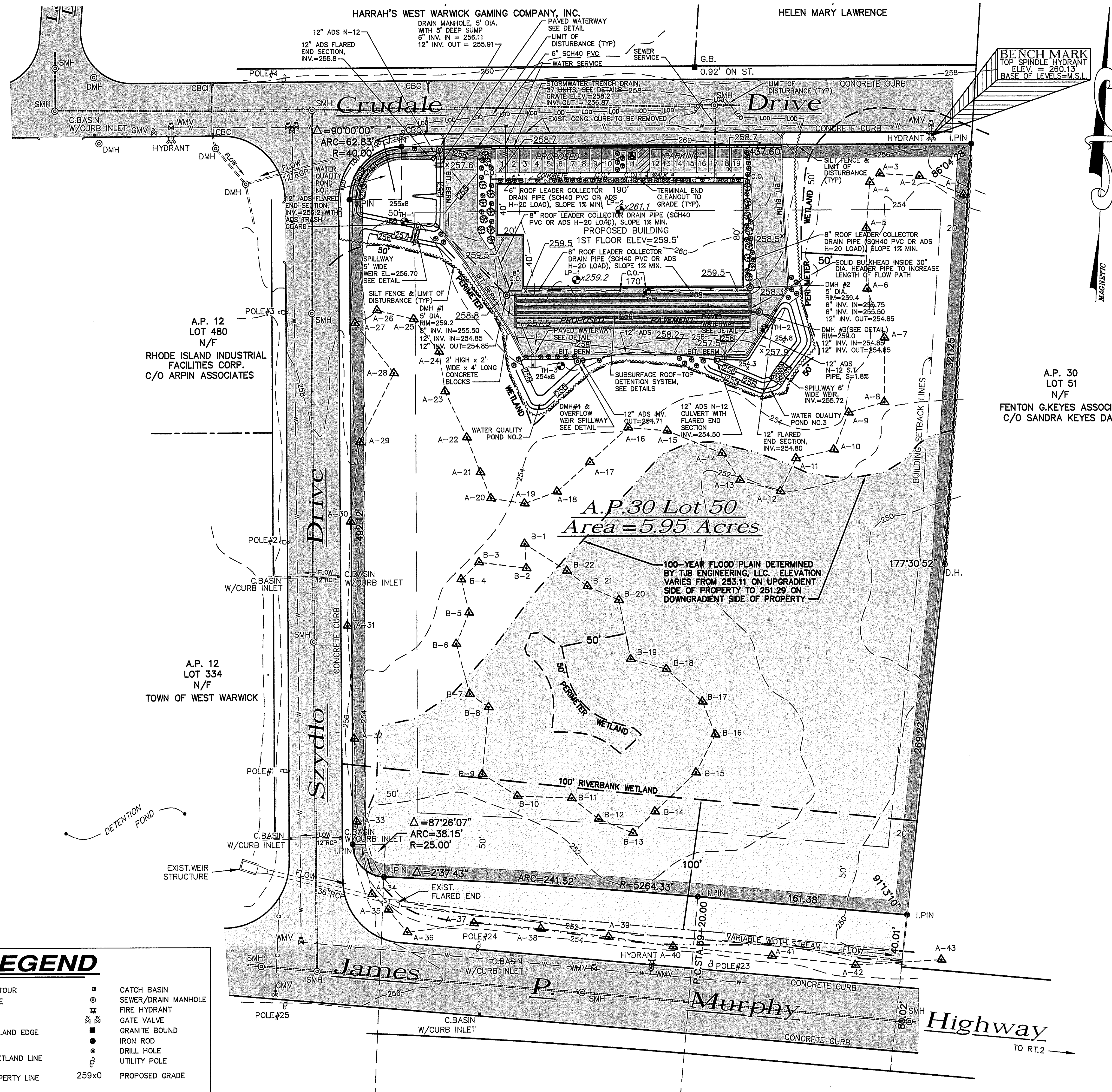
Checked By: T.J.B. Drawn By: T.J.B.  
Scale: AS SHOWN Date: JUNE 2008

NO.	REVISIONS	DATE
1	REVISION COMMENTS	06/23/08
2	REVISION COMMENTS	10/21/08

**TJB ENGINEERING, LLC**  
ESTABLISHED SINCE 1983  
CIVIL ENGINEERING  
PERMITTING \* LAND PLANNING  
SUBDIVISIONS \* WASTEWATER  
1050 MAIN STREET SUITE 30  
EAST GREENWICH, RI 02818  
PHONE: 401-996-1677

**BOYER ASSOCIATES**  
ESTABLISHED SINCE 1983  
1200 MAIN STREET  
WEST WARWICK, RI 02893  
TEL. (401)821-8872 FAX (401)826-1993

Sheet **2**  
of 7 sheets



**SUMMARY OF WATER TABLES & DEPTH TO LEDGE**

I.D.#	DEPTH TO E.S.H.W.T.	DEPTH TO LEDGE	ELEVATION E.S.H.W.T.	ELEVATION LEDGE
TH-1	15"	96"	254.75	248.00*
TH-2	26"	96"	253.83	248.00*
TH-3	24"	78"	253.80	249.30
TH-4	30"	72"	255.30	251.80
LP-1	N/A	89"	N/A	251.78
LP-2	N/A	72"	N/A	255.10

\* DENOTES REFUSAL NOT ENCOUNTERED, BOTTOM OF HOLE WAS ASSUMED TO BE REFUSAL.

**LEGEND**

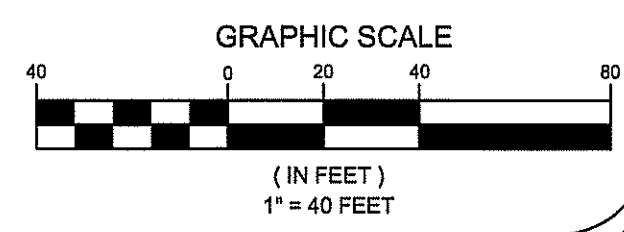
-254-	EXISTING CONTOUR	⊙	CATCH BASIN
- - -	DRAINAGE LINE	⊙	SEWER/RAIN MANHOLE
- - -	WATER LINE	⊙	FIRE HYDRANT
- - -	GAS LINE	⊙	GATE VALVE
▲	FLAGGED WETLAND EDGE	⊙	GRANITE BOUND
- - -	PERIMETER WETLAND LINE	⊙	DRILL HOLE
- - -	CURB LINE	⊙	UTILITY POLE
- - -	EXISTING PROPERTY LINE	⊙	PROPOSED GRADE
- - -	SEWER LINE	⊙	
- - -	ROOF DRAIN LINE	⊙	
⊘	STONE WALL	⊙	
- - -	SILT FENCE & LIMIT OF DISTURBANCE	⊙	
- - -	LIMIT OF DISTURBANCE	⊙	

**PROPOSED PLAN**  
SCALE: 1"=40'

RIDEM WETLAND PERMIT SET

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF WATER RESOURCES  
FRESHWATER WETLANDS PROGRAM  
APPROVED WITH CONDITIONS  
AS SPECIFIED IN THE LETTER OF APPROVAL  
DATED OCT 31 2008 FILE # 08-0239  
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL  
APPROVED PLANS MUST BE AT CONSTRUCTION SITE  
*Charles A. Hebert*

TIMOTHY J. BEHAN  
No. 6278  
REGISTERED PROFESSIONAL ENGINEER



Being Assessors Plat No. 30 Lot No. 50  
**PROPOSED PLAN**  
**JBACH REALTY LLC**  
LOCATION: West Warwick Industrial Park  
Crudale Drive, West Warwick, Rhode Island, P. 02886  
PREPARED FOR: Henry DiPietro  
14 Clover Drive  
Coventry, Rhode Island 02816

Checked by: T.J.B. Drawn by: T.J.B. Date: JUNE 2008  
Scale: AS SHOWN

NO.	REVISION	DATE
1	ISSUE COMMENTS	10/27/08
2	ISSUE COMMENTS	10/27/08

**TJB ENGINEERING, LLC**  
CIVIL ENGINEERING  
PERMITTING \* LAND PLANNING  
SUBDIVISIONS \* WASTEWATER  
1050 MAIN STREET SUITE 30  
EAST GREENWICH, RI 02818  
PHONE: 401-996-1677

**BOYER ASSOCIATES**  
ESTABLISHED SINCE 1985  
1200 MAIN STREET  
WEST WARWICK, RI 02893  
TEL: (401)821-8872 FAX: (401)826-1993

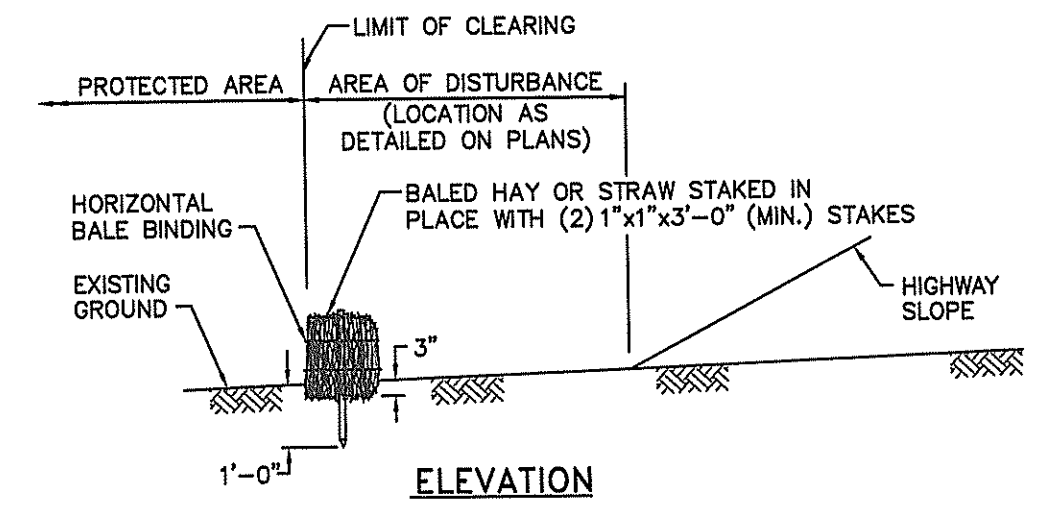
Sheet 3 of 7 sheets

HARRAH'S WEST WARWICK GAMING COMPANY, INC.

HELEN MARY LAWRENCE

BENCH MARK  
TOP SPINDLE HYDRANT  
ELEV. = 260.13  
BASE OF LEVEL = M.S.L.

CATCH BASIN INLET PROJECTION 9.8.0  
CONSTRUCTION ACCESS 9.9.0  
LIMIT OF DISTURBANCE (TYP.)  
CONSTRUCTION ACCESS 9.9.0  
G.B.  
0.92' ON ST.  
LIMIT OF DISTURBANCE (TYP.)  
CONCRETE CURB  
SMH  
HYDRANT  
I.PIN



ELEVATION

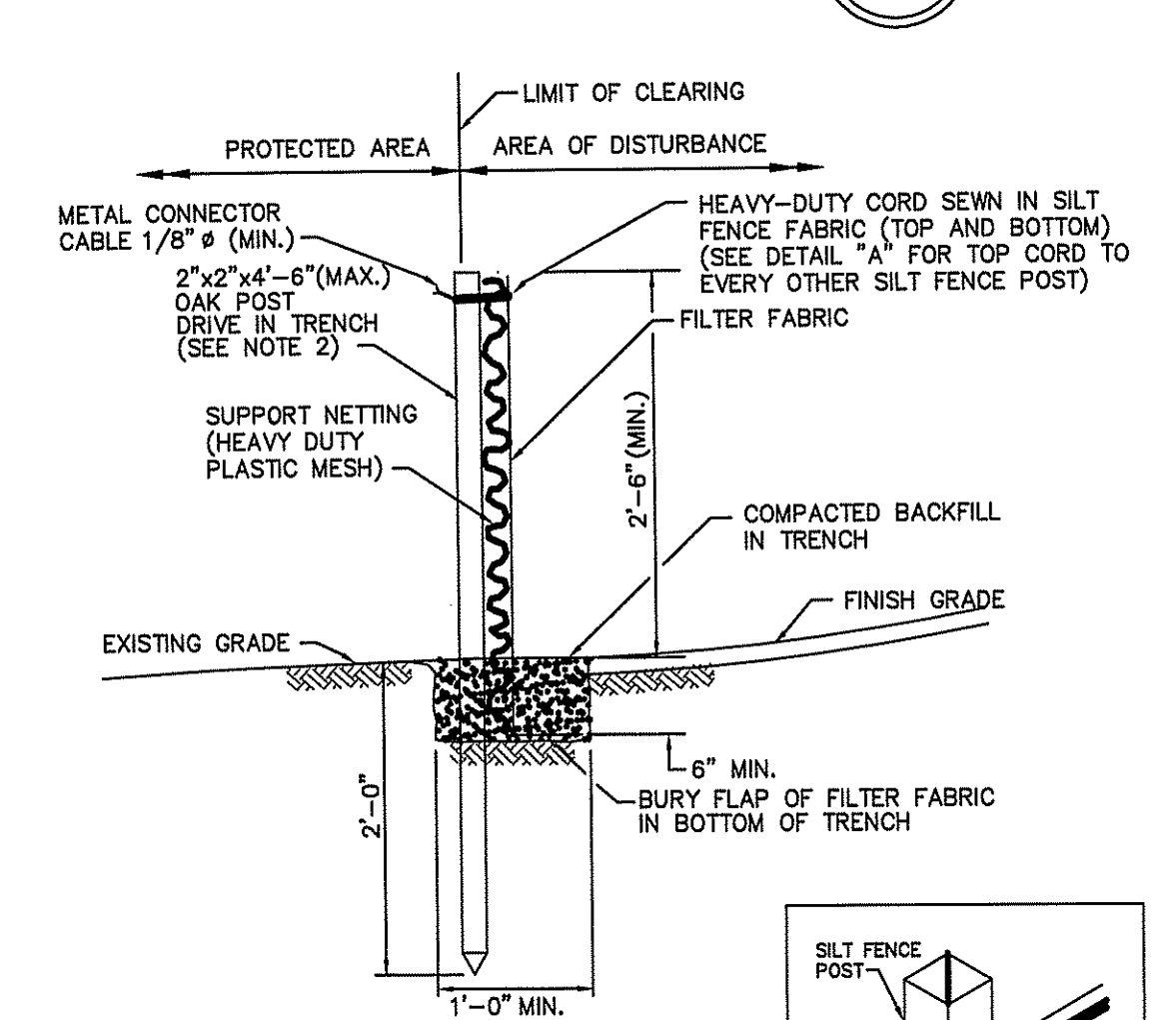
PLAN

BALED HAY EROSION CHECK

R.I. STANDARD 9.1.0

NOTES:  
1. SHALL BE IN ACCORDANCE WITH SECTION 206 OF THE R.I. STANDARD SPECIFICATIONS  
2. TO BE USED WHERE THE EXISTING GROUND SLOPES AWAY FROM THE HIGHWAY EMBANKMENT AS CALLED FOR ON PLANS  
3. AT APPROXIMATE 100'-0" INTERVALS A BALE OF HAY IS TO BUTT PERPENDICULARLY.

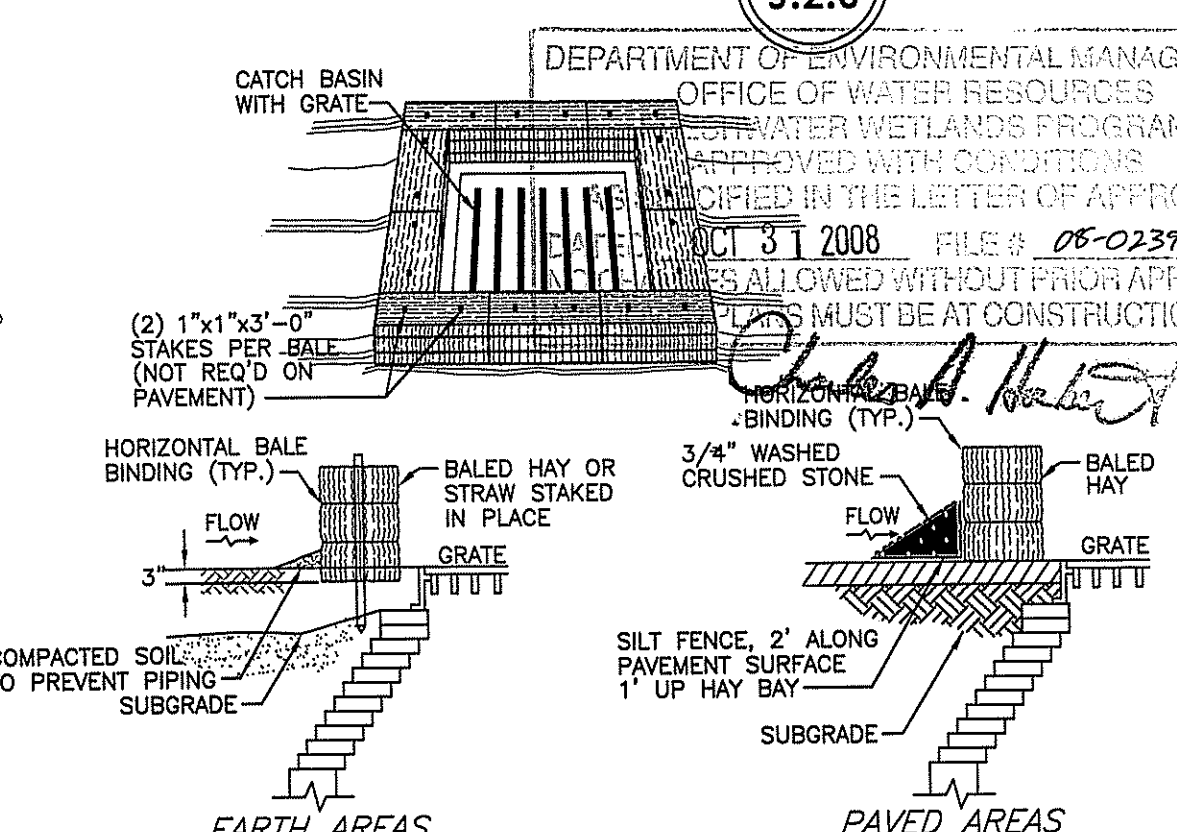
NOTES:  
1. SHALL BE IN ACCORDANCE WITH SECTION 206 OF THE R.I. STANDARD SPECIFICATIONS  
2. 2"x2"x4'-6" (MAX.) OAK POSTS FOR SILT FENCE SHALL BE LOCATED 8'-0" (MAX.) O.C. IN WETLAND AREAS AND 4'-0" (MAX.) O.C. IN WETLAND RAVINE, GULLY OR DROP-OFF AREAS AS SHOWN ON PLANS.  
3. 1"x1"x4'-6" (MIN.) POSTS PERMITTED FOR PRE-FABRICATED SILT FENCE.  
4. SILT FENCE SHALL BE INSTALLED BEFORE ANY GRUBBING OR EARTH EXCAVATION TAKES PLACE.



SILT FENCE DETAIL

R.I. STANDARD 9.2.0

NOTES:  
1. SHALL BE IN ACCORDANCE WITH SECTION 206 OF THE R.I. STANDARD SPECIFICATIONS  
2. 2"x2"x4'-6" (MAX.) OAK POSTS FOR SILT FENCE SHALL BE LOCATED 8'-0" (MAX.) O.C. IN WETLAND AREAS AND 4'-0" (MAX.) O.C. IN WETLAND RAVINE, GULLY OR DROP-OFF AREAS AS SHOWN ON PLANS.  
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4. SILT FENCE SHALL BE INSTALLED BEFORE ANY GRUBBING OR EARTH EXCAVATION TAKES PLACE.



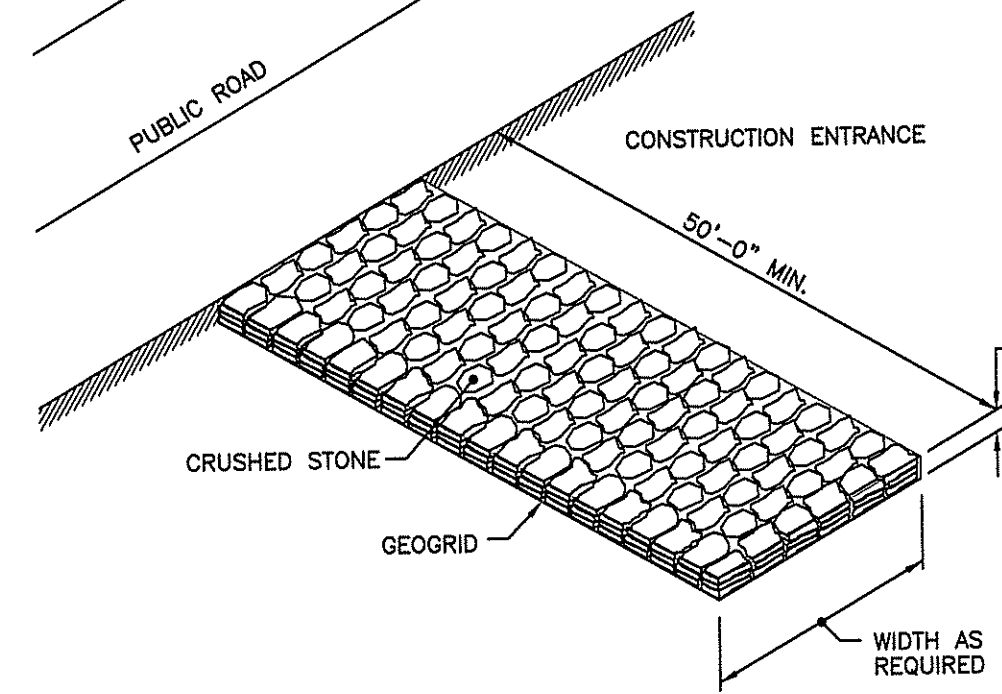
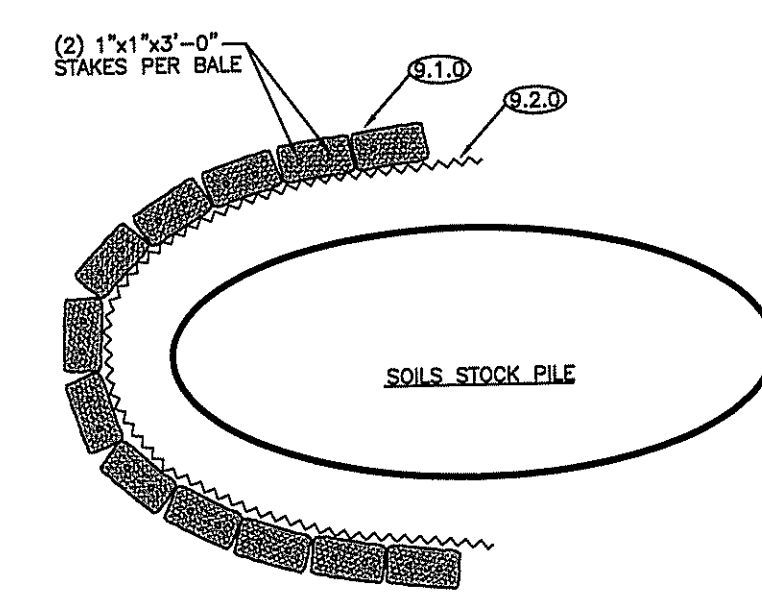
BALED HAY CATCH BASIN INLET PROTECTION

R.I. STANDARD 9.8.0

NOTES:  
1. SHALL BE IN ACCORDANCE WITH SECTION 209 OF THE R.I. STANDARD SPECIFICATIONS.  
2. THIS INLET PROTECTION CAN ALSO BE USED WHEN CONSTRUCTION SEQUENCING REQUIRES A CATCH BASIN TO BE EXPOSED TO SEDIMENT FROM THE SUBGRADE. THIS WILL BE ACHIEVED BY INSTALLING THE BALED HAY AS SHOWN ON THIS DETAIL INTO THE SUBGRADE.  
3. THE PERIMETER CONFIGURATION OF THE BALED HAY WILL VARY DEPENDING ON THE PARTICULAR TYPE OF CATCH BASIN INLET BEING CONSTRUCTED. THE ENGINEER WILL PROVIDE SPECIFIC DIRECTION IN SUCH CASES.

RIDEM WETLAND PERMIT SET

SOILS STOCK PILE DETAIL WITH DOUBLE HAY BALE EROSION PROTECTION (TYPICAL ALL STOCK PILES)



CONSTRUCTION ACCESS

R.I. STANDARD 9.9.0

NOTE: SHALL BE IN ACCORDANCE WITH SECTION 211 OF THE R.I. STANDARD SPECIFICATIONS.

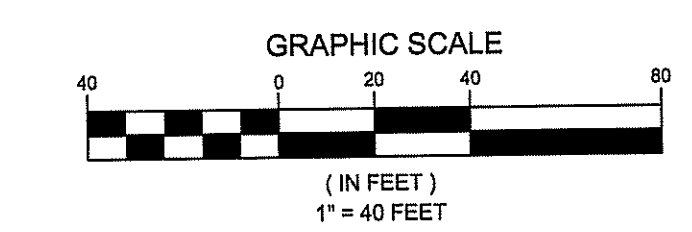
LEGEND table with symbols for contours, drainage lines, wetland edges, and various utility poles.

259x0

CATCH BASIN SEWER/RAIN MANHOLE  
FIRE HYDRANT  
GATE VALVE  
GRANITE BOUND  
IRON ROD  
DRILL HOLE  
UTILITY POLE  
PROPOSED GRADE

SOIL EROSION & SEDIMENTATION CONTROL PLAN

SCALE: 1"=40'



GRAPHIC SCALE

(IN FEET)

1" = 40 FEET

A.P. 30 Lot 50  
Area = 5.95 Acres

100-YEAR FLOOD PLAIN DETERMINED BY TJB ENGINEERING, LLC. ELEVATION VARIES FROM 253.11 ON UPGRADIENT SIDE OF PROPERTY TO 251.29 ON DOWNGRADIENT SIDE OF PROPERTY

A.P. 30 LOT 51 N/F  
FENTON G. KEYES ASSOCIATES  
C/O SANDRA KEYES DAILEY

TIMOTHY J. BEHAN  
REGISTERED PROFESSIONAL ENGINEER

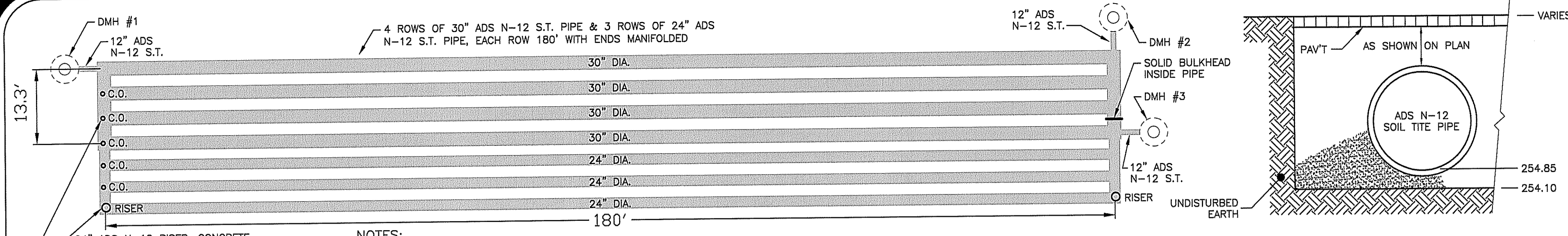
JBACH REALTY, LLC logo and contact information for West Warwick Industrial Park.

Revisions table with columns for date, revision, and description.

TJB ENGINEERING, LLC logo and contact information for Civil Engineering and Land Planning.

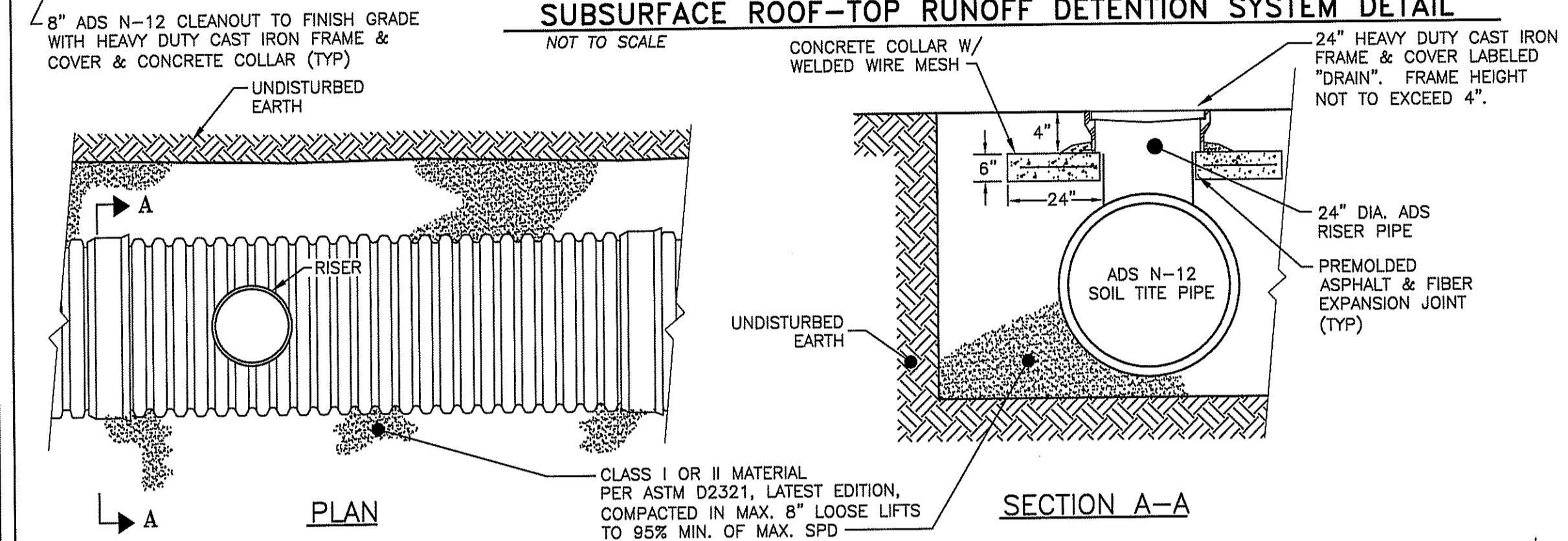
BOYER ASSOCIATES logo and contact information for 1200 Main Street, West Warwick, RI.



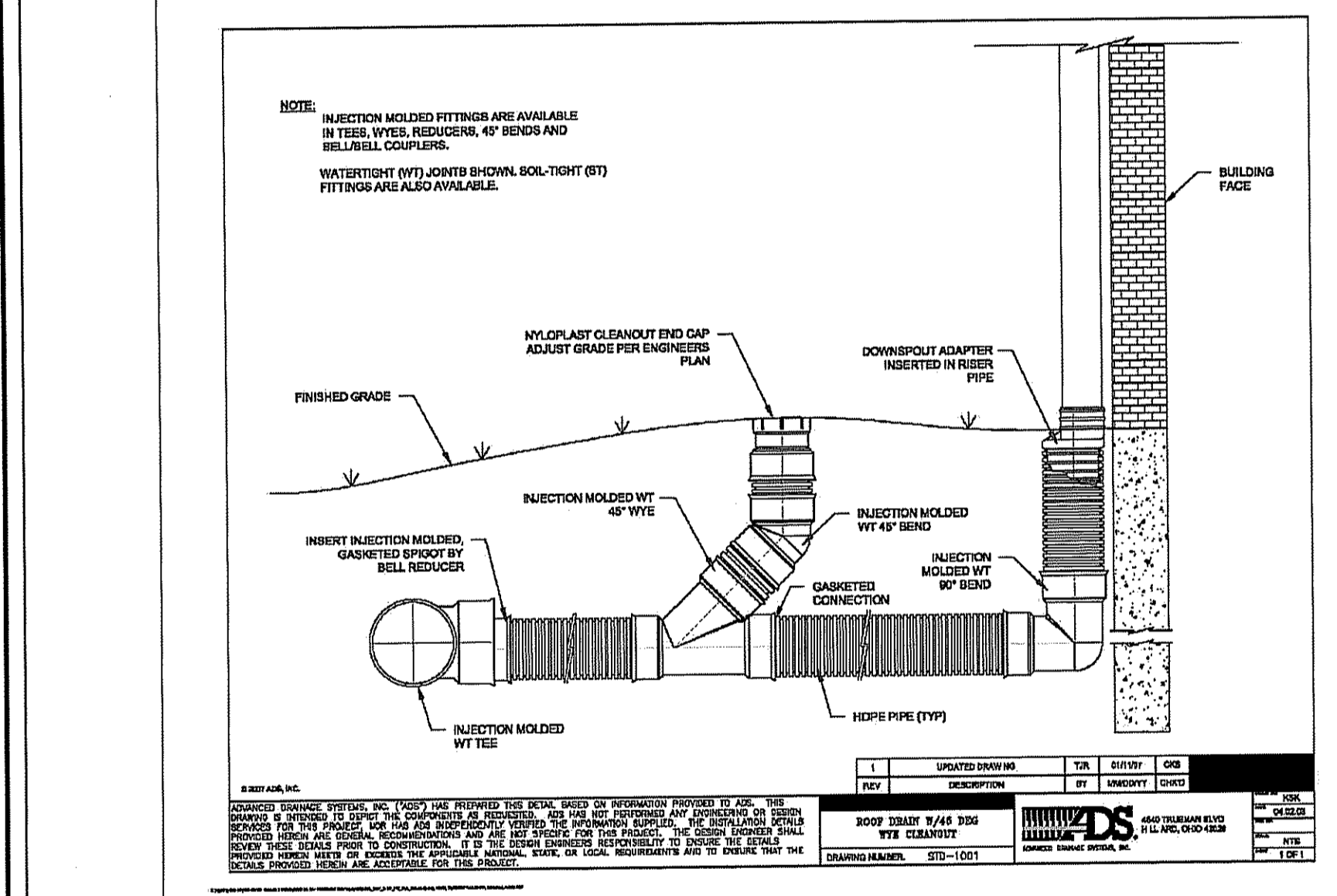


**SUBSURFACE ROOF-TOP RUNOFF DETENTION SYSTEM DETAIL**  
NOT TO SCALE

**SUBSURFACE ROOF-TOP RUNOFF DETENTION SYSTEM SECTION**  
NOT TO SCALE



**RISER PIPE TYPICAL DETAIL**  
SUBSURFACE ROOF-TOP RUNOFF DETENTION SYSTEM DETAIL  
NOT TO SCALE

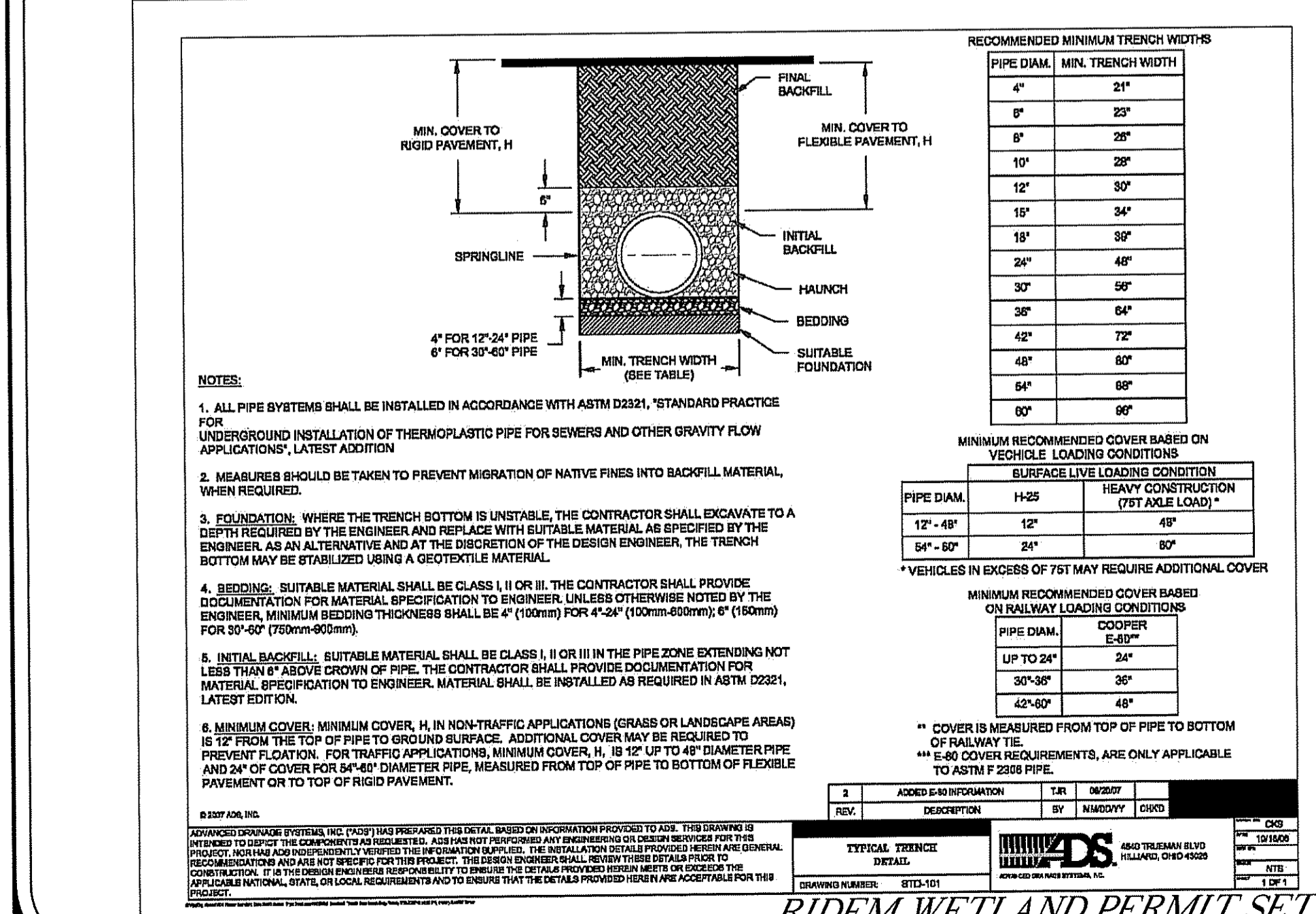


**MATERIAL SPECIFICATIONS:**

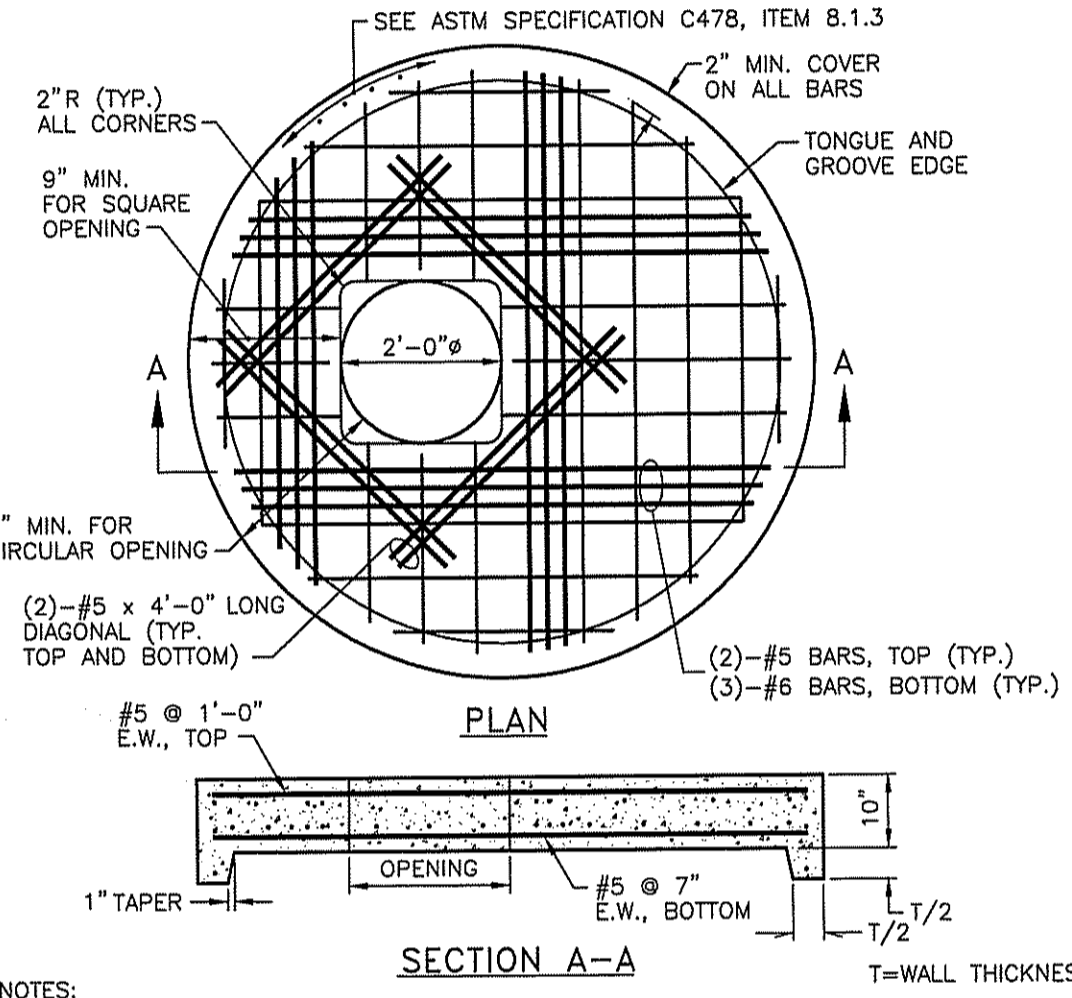
<b>R-6 RIP RAP:</b> 100% PASS - 26" 0-50% PASS - 13" 0-15% PASS - 8"	<b>R-5 RIP RAP:</b> 100% PASS - 20" 0-50% PASS - 10" 0-15% PASS - 6"	<b>R-4 RIP RAP:</b> 100% PASS - 14" 0-50% PASS - 7" 0-15% PASS - 4"	<b>R-3 RIP RAP:</b> 100% PASS - 8" 0-50% PASS - 4" 0-15% PASS - 2"
---	---	--	---

LOCATION OF RIP RAP OUTLET	FILTER STONE DEPTH & SIZE	RIP RAP DEPTH & SIZE	LENGTH	WIDTH
ALL 12" F.E.S.'S	6" FS-2	12" R-4	6'	6'

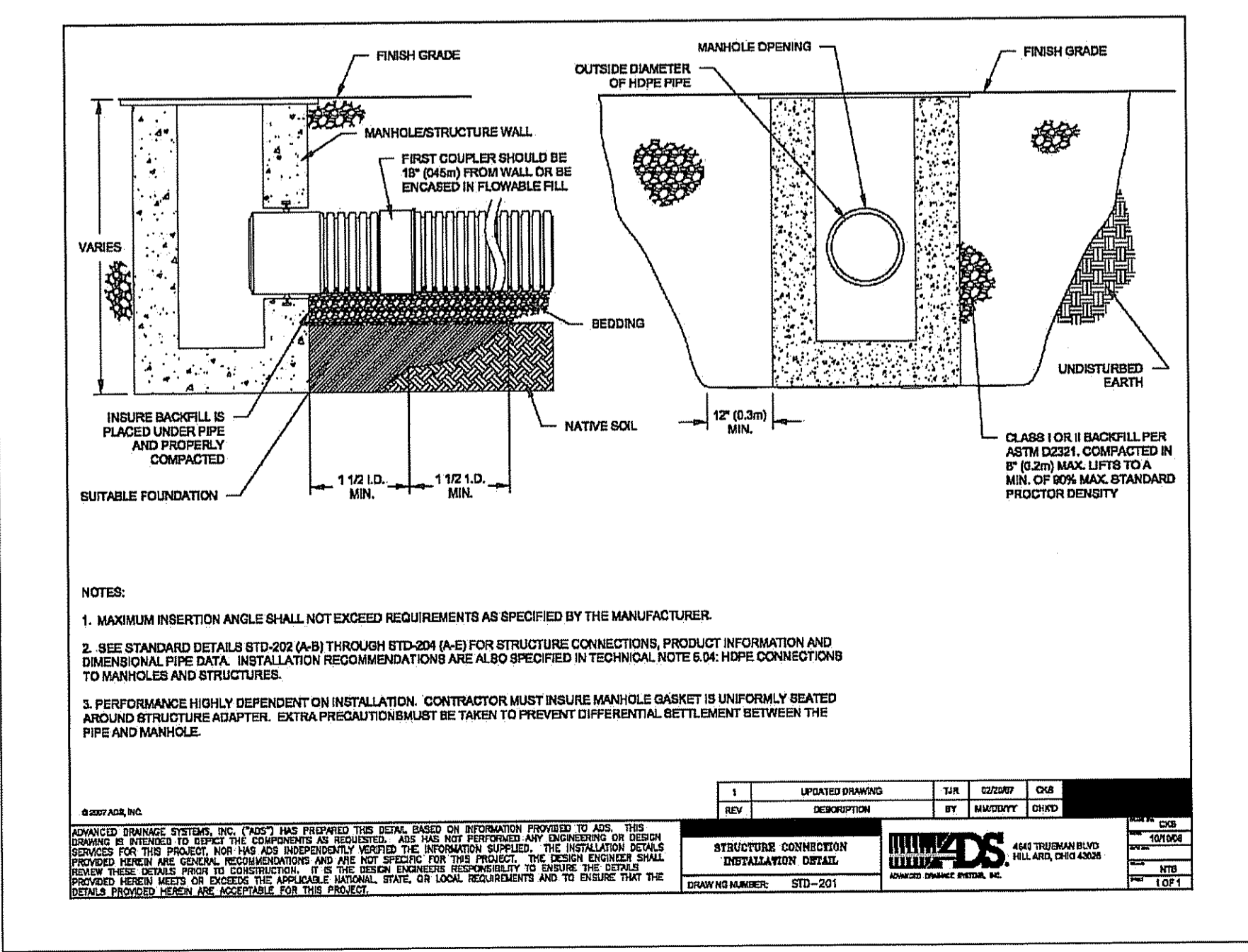
**OUTLET RIP RAP DETAIL**  
NOT TO SCALE



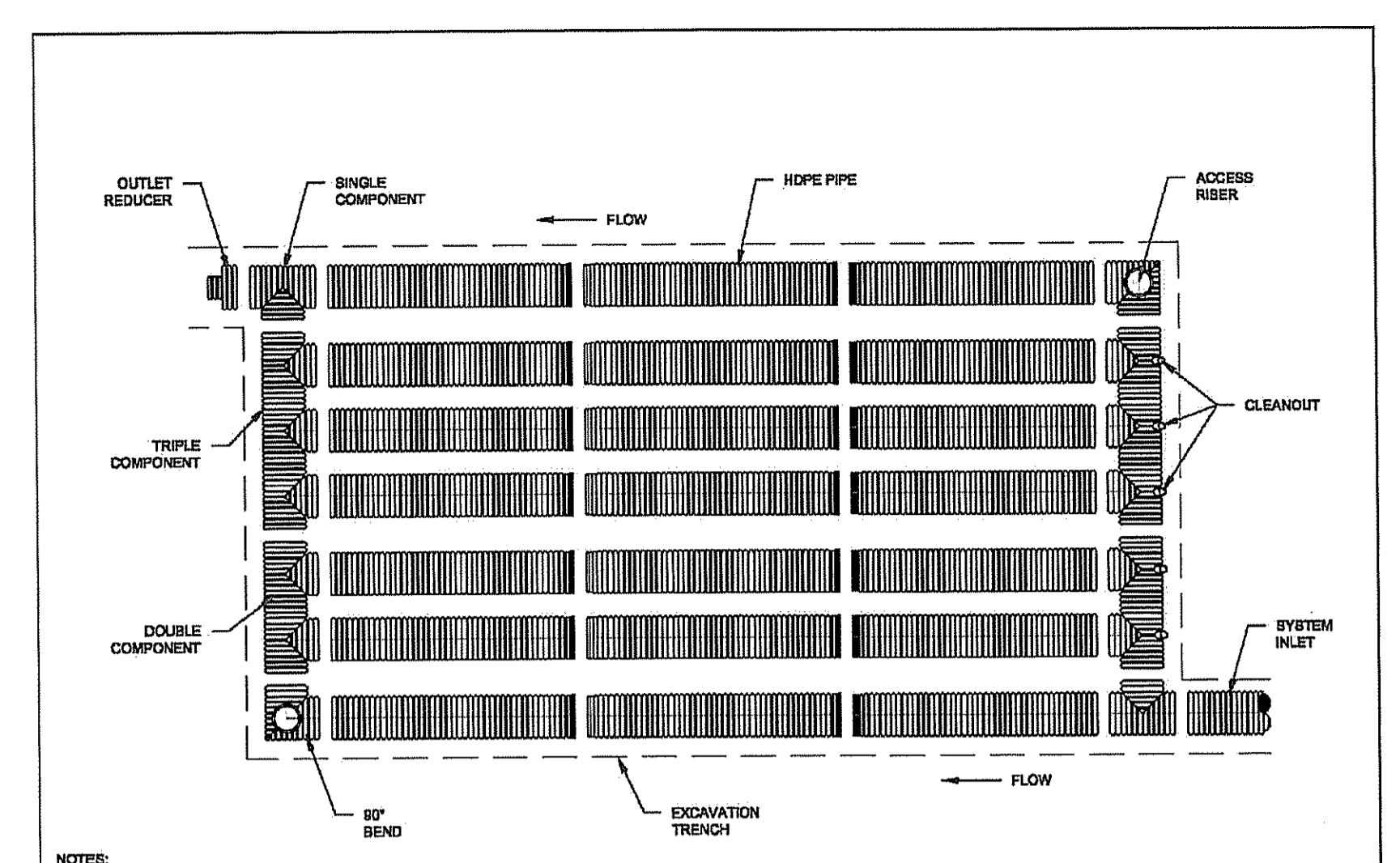
**RIDEM WETLAND PERMIT SET**



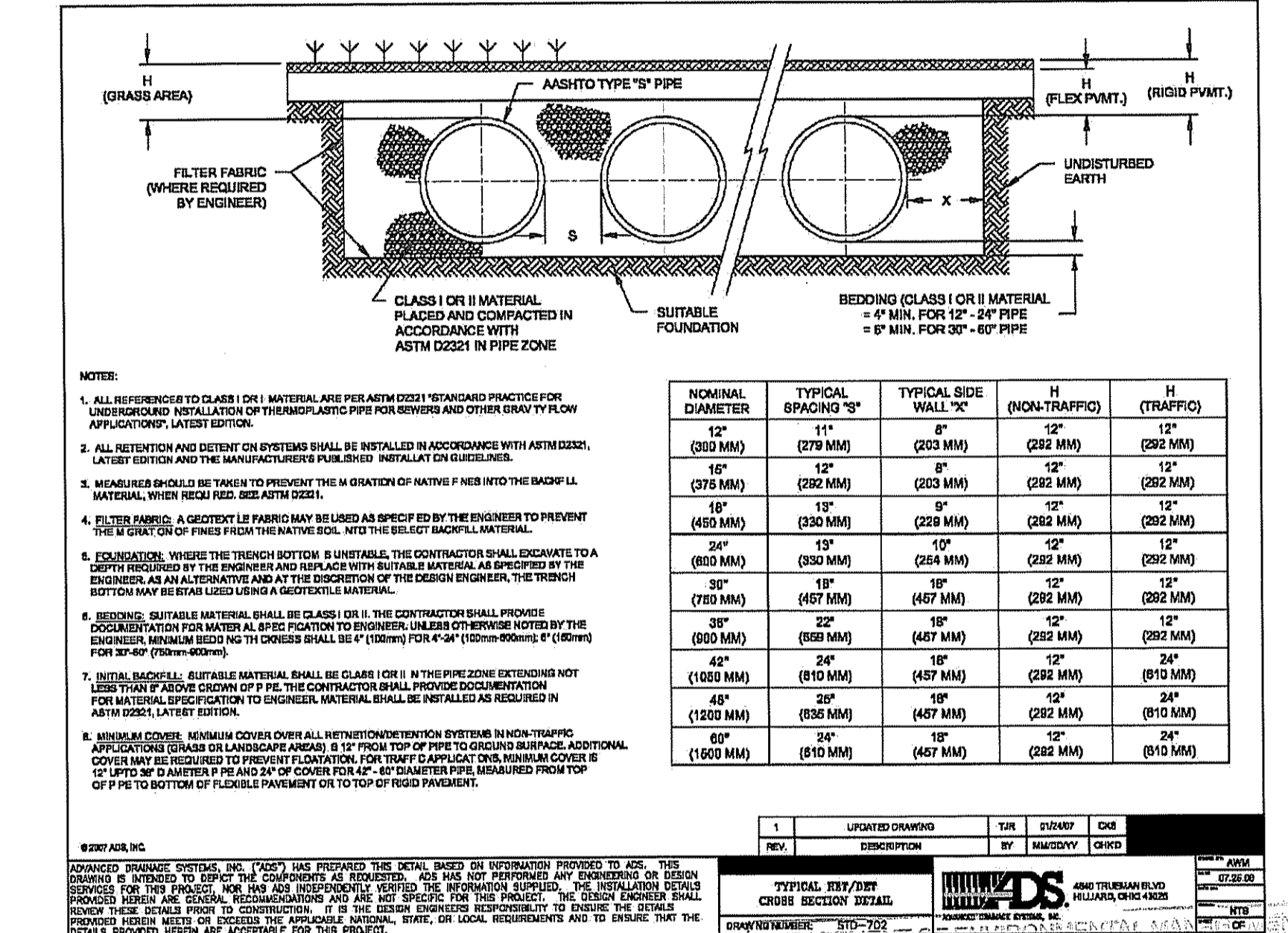
**ALTERNATE TOP COVER FOR ROUND PRECAST MANHOLES AND CATCH BASINS**  
R.I. STANDARD 4.7.2



- NOTES:**
- MAXIMUM INSERTION ANGLE SHALL NOT EXCEED REQUIREMENTS AS SPECIFIED BY THE MANUFACTURER.
  - SEE STANDARD DETAILS (810-202 (A-B) THROUGH 810-204 (A-E)) FOR STRUCTURE CONNECTIONS, PRODUCT INFORMATION AND DIMENSIONAL PIPE DATA. INSTALLATION RECOMMENDATIONS ARE ALSO PROVIDED IN TECHNICAL NOTE 8.04 HOPE CONNECTIONS TO MANHOLES AND STRUCTURES.
  - PERFORMANCE HIGHLY DEPENDENT ON INSTALLATION. CONTRACTOR MUST INSURE MANHOLE GASKET IS UNIFORMLY SEATED AND STRUCTURE ADAPTER. EXTRA PRECAUTIONS MUST BE TAKEN TO PREVENT DIFFERENTIAL SETTLEMENT BETWEEN THE PIPE AND MANHOLE.

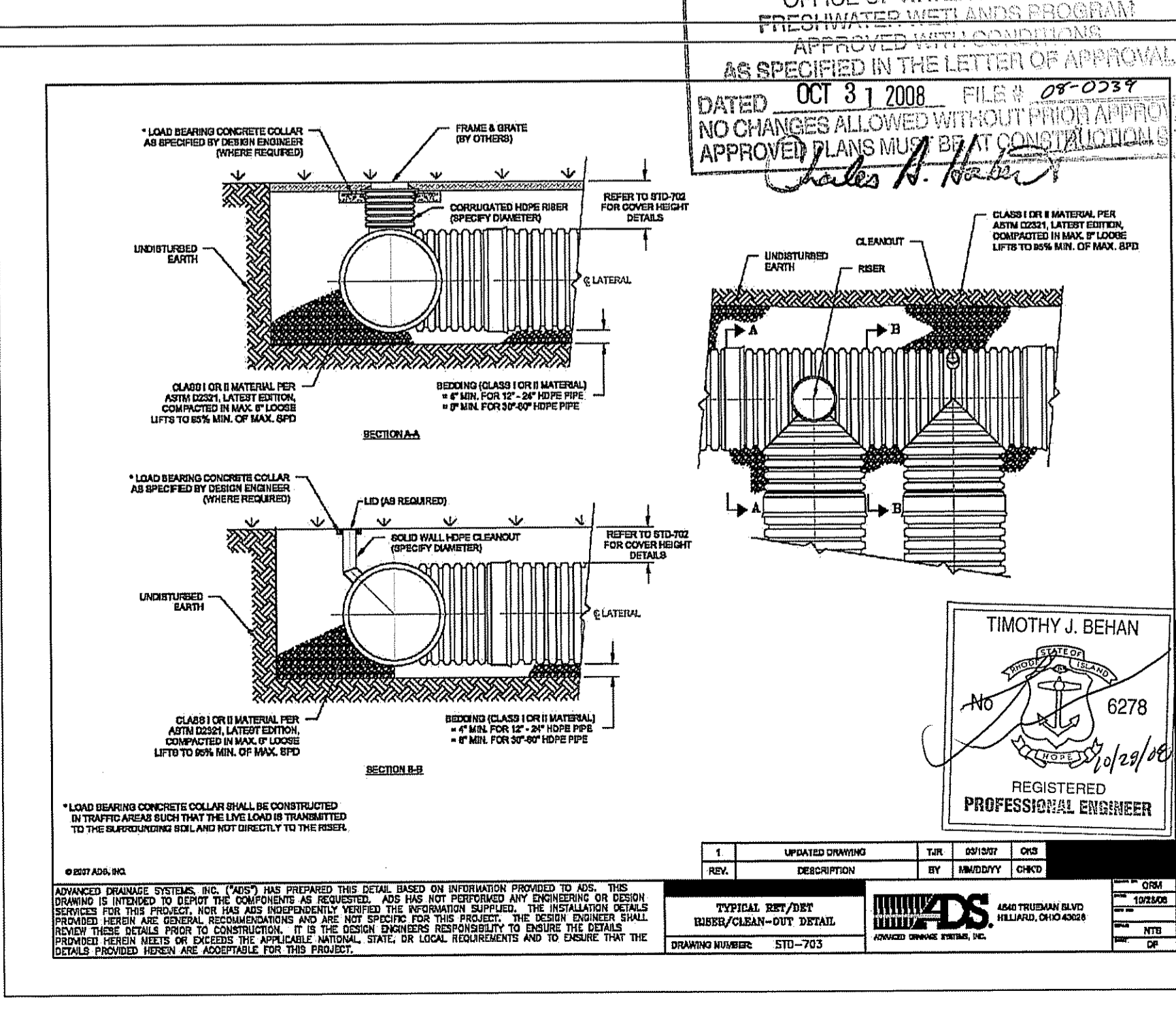


**SUBSURFACE ROOF-TOP RUNOFF DETENTION SYSTEM DETAIL**  
NOT TO SCALE



**TABLE 1: NOMINAL DIAMETER, TYPICAL SPACING, TYPICAL SIZE, H (NON-Traffic), H (Traffic)**

NOMINAL DIAMETER	TYPICAL SPACING "S"	TYPICAL SIZE "H"	H (NON-Traffic)	H (Traffic)
12"	12"	6"	12"	12"
15"	12"	8"	12"	12"
18"	12"	10"	12"	12"
24"	15"	12"	12"	12"
30"	18"	15"	12"	12"
36"	24"	18"	12"	12"
42"	30"	24"	12"	12"
48"	36"	30"	12"	12"
54"	42"	36"	12"	12"
60"	48"	42"	12"	12"



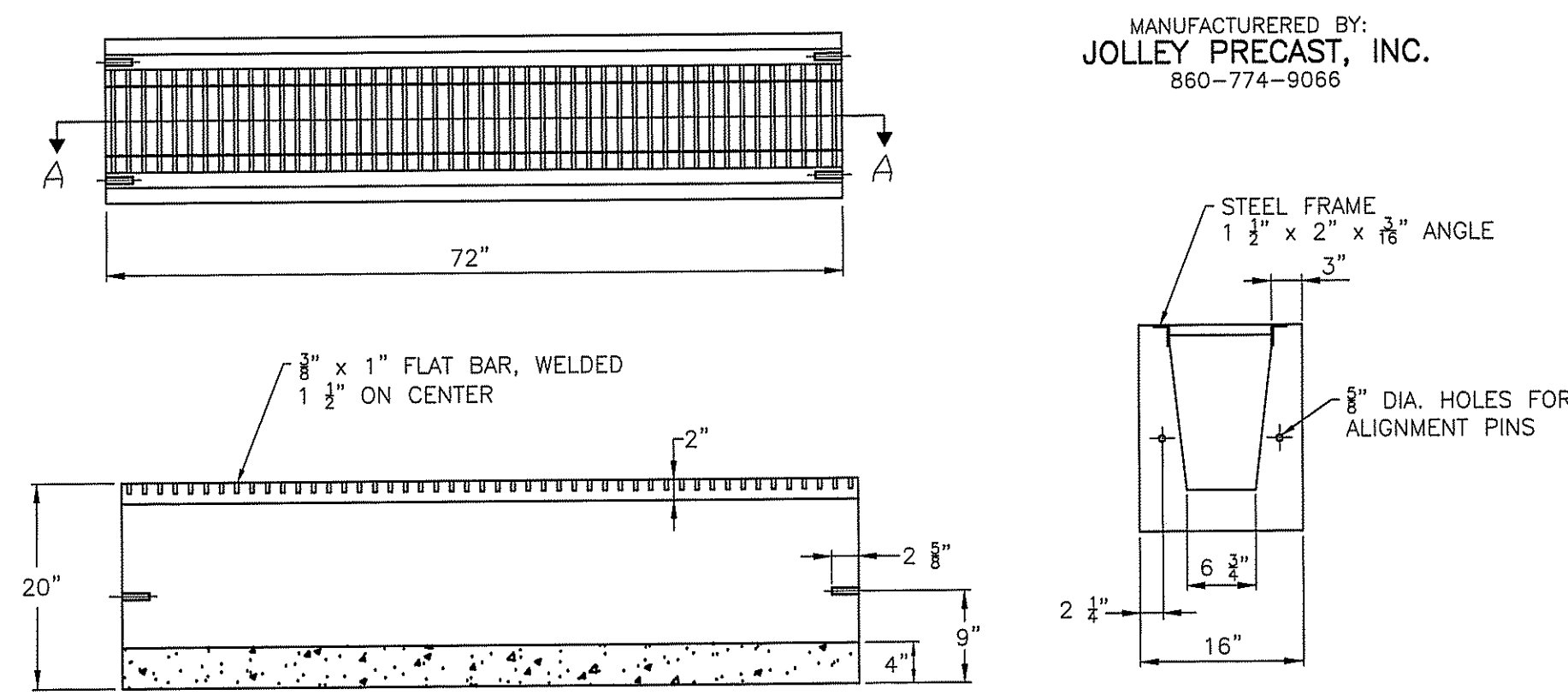
**SUBSURFACE ROOF-TOP RUNOFF DETENTION SYSTEM DETAIL**  
NOT TO SCALE

Being Assessors Plat No. 30 Lot No. 50  
**JBACH REALTY LLC**  
LOCATION: West Warwick Industrial Park, Crudale Dr., Szydio Dr. & James P. Murphy Hwy. West Warwick, Rhode Island 02893  
PREPARED FOR: Henry DiPietro  
DATE: OCT 28 2008  
14 Clover Drive Coventry, Rhode Island 02816

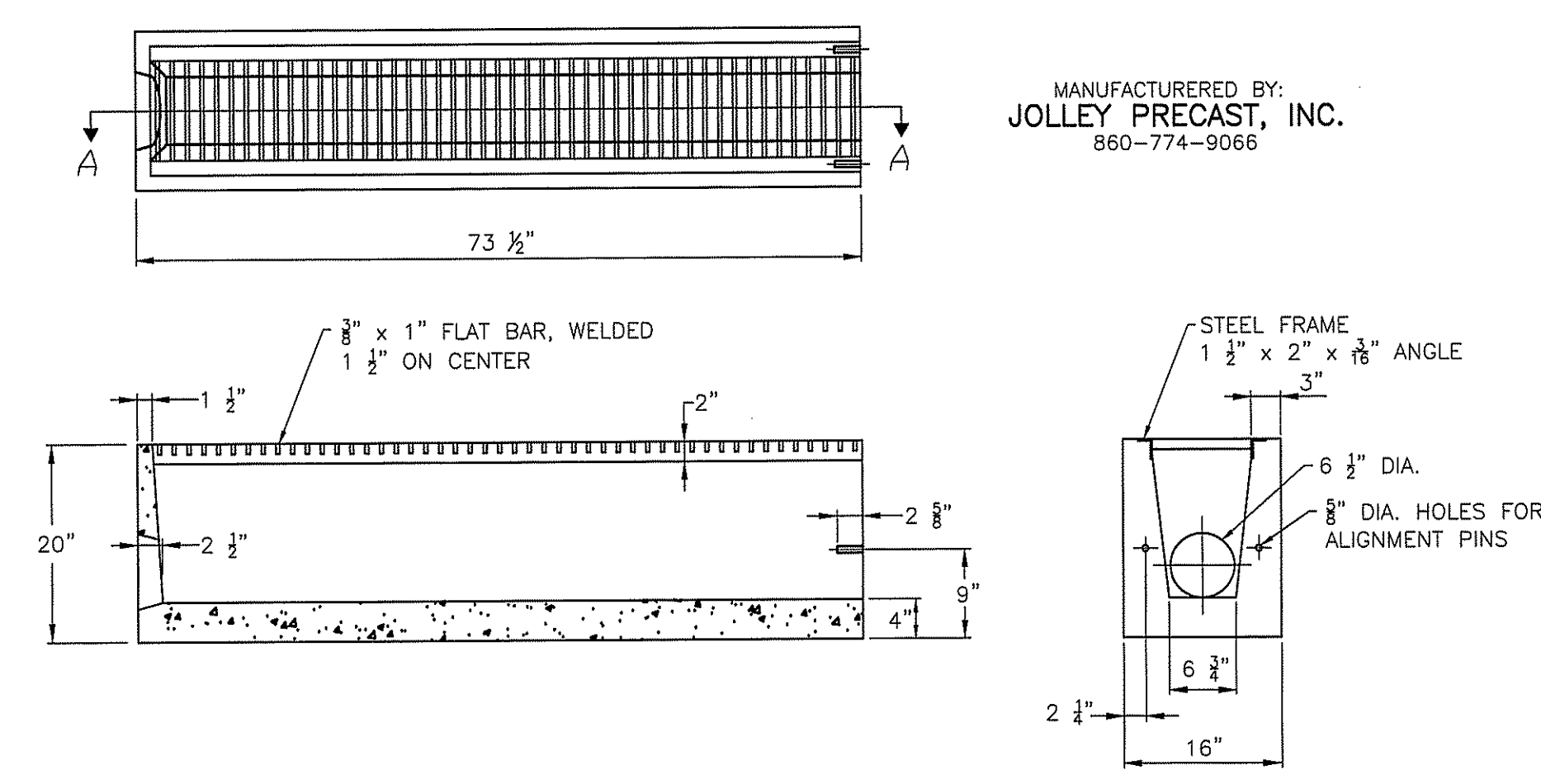
Checked By: T.J.B. Drawn By: T.J.B.  
AS SHOWN DATE: JUNE 2008  
REVISIONS: NONE  
BY: DATE: REASON: COMMENTS: APPROVED: DATE: DRAWING NUMBER: STD-701

**TJB ENGINEERING, LLC**  
CIVIL ENGINEERING  
PERMITTING \* LAND PLANNING  
SUBDIVISIONS \* WASTEWATER  
1050 MAIN STREET SUITE 30  
EAST GREENWICH, RI 02818  
PHONE: 401-996-1677

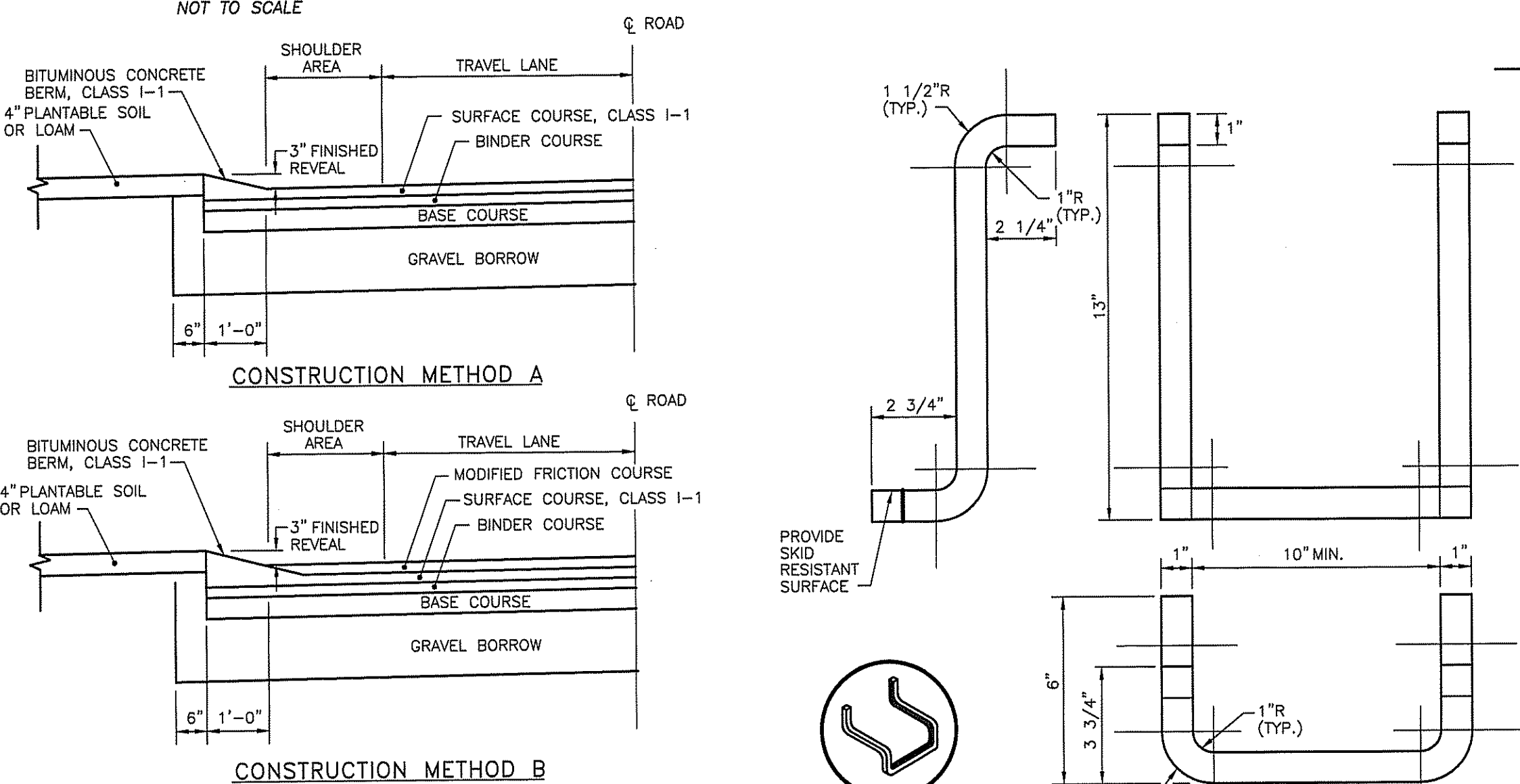
**BOYER ASSOCIATES**  
ESTABLISHED SINCE 1958  
1200 MAIN STREET  
WEST WARWICK, RI 02893  
TEL: (401)821-8872 FAX (401)826-1993  
Sheet 6 of 7 sheets



**STORMWATER TRENCH DRAIN - MIDDLE UNIT TYPICAL DETAIL**  
NOT TO SCALE



**STORMWATER TRENCH DRAIN - END UNIT TYPICAL DETAIL**  
NOT TO SCALE



**CONSTRUCTION METHOD A**

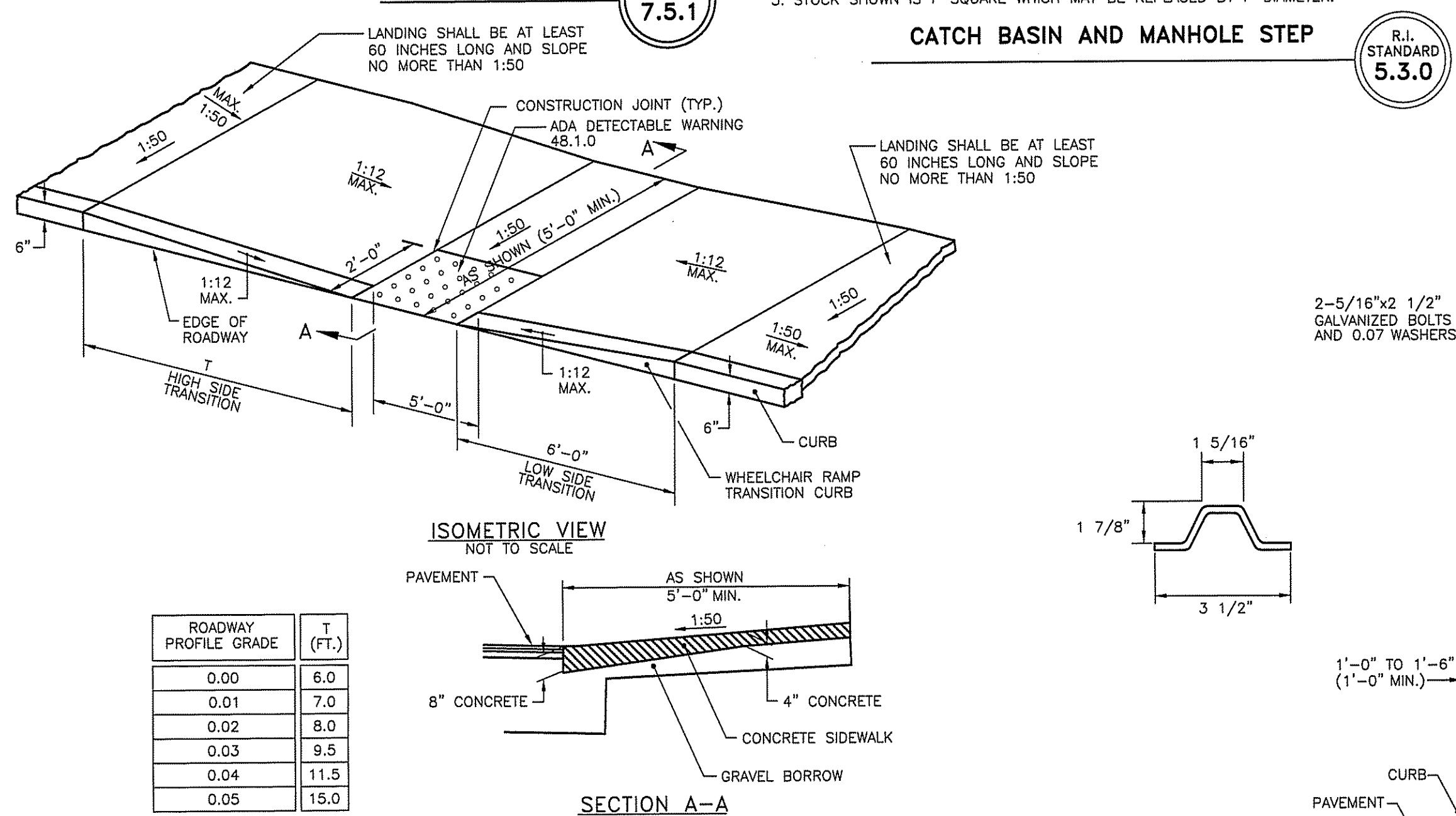
**CONSTRUCTION METHOD B**

**NOTES:**  
1. SHALL BE IN ACCORDANCE WITH SECTION 905 OF THE R.I. STANDARD SPECIFICATIONS.  
2. BITUMINOUS BERM CAN BE PLACED AT THE SAME TIME THAT THE SURFACE COURSE LAYER IS PLACED ON THE PROJECT ROADWAY, OR IT CAN BE INSTALLED IN A SEPARATE OPERATION.

**NOTES:**  
1. STEPS SHALL CONFORM TO SECTION M.04 OF THE R.I. STANDARD SPECIFICATIONS.  
2. CROSS SECTION AREA MAY BE REDUCED UPON SUBMISSION OF CERTIFIED LOAD TESTS. STEPS MUST SUPPORT 300 LBS.  
3. STOCK SHOWN IS 1" SQUARE WHICH MAY BE REPLACED BY 1" DIAMETER.

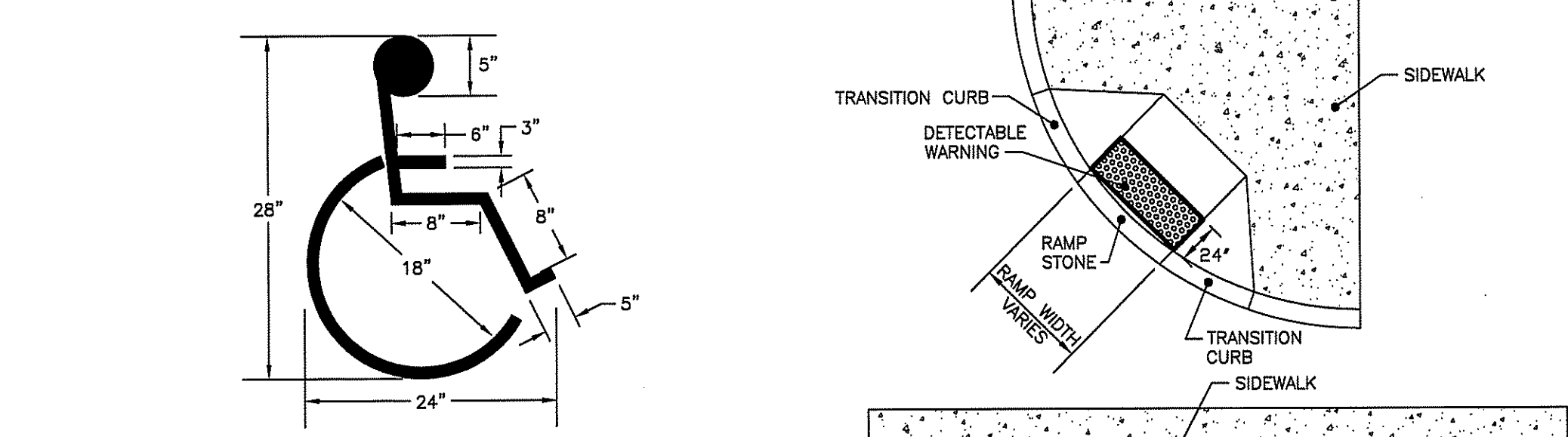
**BITUMINOUS BERM**  
R.I. STANDARD 7.5.1

**CATCH BASIN AND MANHOLE STEP**  
R.I. STANDARD 5.3.0

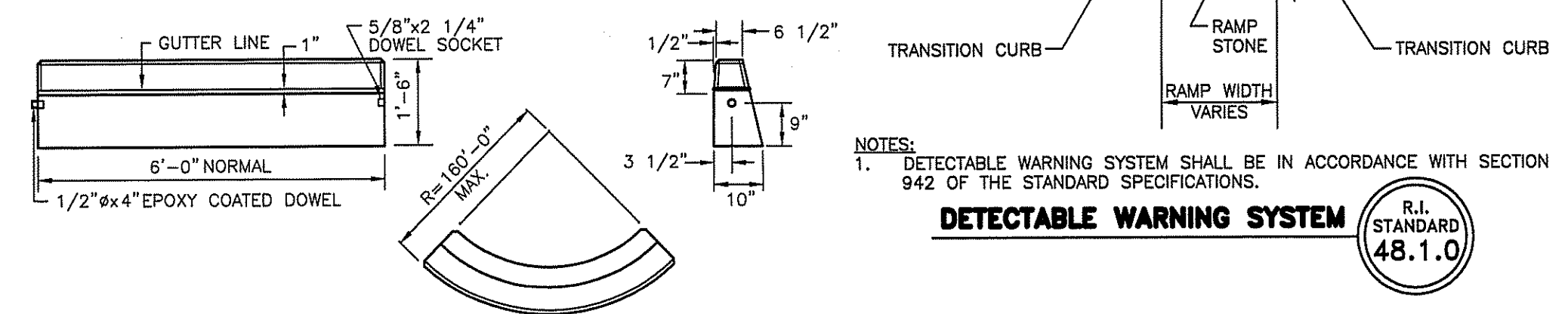


**NOTES:**  
1. SHALL BE IN ACCORDANCE WITH SECTION 904 OF THE R.I. STANDARD SPECIFICATIONS.  
2. WHEN ANY OBSTRUCTION LOCATED IN THE SIDEWALK FALLS WITHIN A CROSSWALK AREA, THE WHEELCHAIR RAMP WILL BE PLACED SUCH THAT THE OBSTRUCTION FALLS OUTSIDE OF THE RAMP.  
3. AT NO TIME IS ANY PART OF THE WHEELCHAIR RAMP TO BE LOCATED OUTSIDE OF THE CROSSWALK, AND IT IS TO BE CENTERED WHENEVER POSSIBLE.  
4. DRAINAGE FACILITIES ARE TO BE LOCATED UP-GRADE OF ALL WHEELCHAIR RAMPS.  
5. LOCATION OF WHEELCHAIR RAMPS IS AS SHOWN ON CONTRACT DRAWINGS.  
6. IN NO INSTANCE SHALL THE SIDEWALK CROSS SLOPE EXCEED 1:50 EXCEPT WITHIN THE RAMP AREA.  
7. AN UNOBSTRUCTED PATH OF TRAVEL WITH A MINIMUM WIDTH OF 5'-0" SHALL BE MAINTAINED.  
8. THE WHEELCHAIR RAMP SLOPE AND SIDE SLOPES (TRANSITIONS), MUST NOT EXCEED 1:12. HOWEVER, THESE SLOPES MAY BE FLATTER THAN 1:12 WHEN WARRANTED BY SURROUNDING CONDITIONS.  
9. WHERE THE ROAD PROFILE EXCEEDS 5% HIGH SIDE TRANSITION LENGTH (T) SHALL BE EIGHTEEN FEET (18'-0").  
10. IN NO CASE, WHERE A STOP LINE IS WARRANTED, SHALL A RAMP BE PLACED BEHIND THE STOP LINE.  
11. THE ENTRANCE OF THE WHEELCHAIR RAMP SHALL BE FLUSH WITH THE ROADWAY.  
12. THE WHEELCHAIR RAMP SHALL BE CENTERED RADIALLY, OPPOSITE THE POINT WHEN POSSIBLE.  
13. MINIMUM LENGTH OF STRAIGHT OR CIRCULAR FILLER PIECES TO BE 3'-0" (GREATER LENGTHS PREFERRED).  
14. ALL REQUIRED CUTTING OF CURB PIECES TO BE PAID FOR UNDER COST OF CURB.

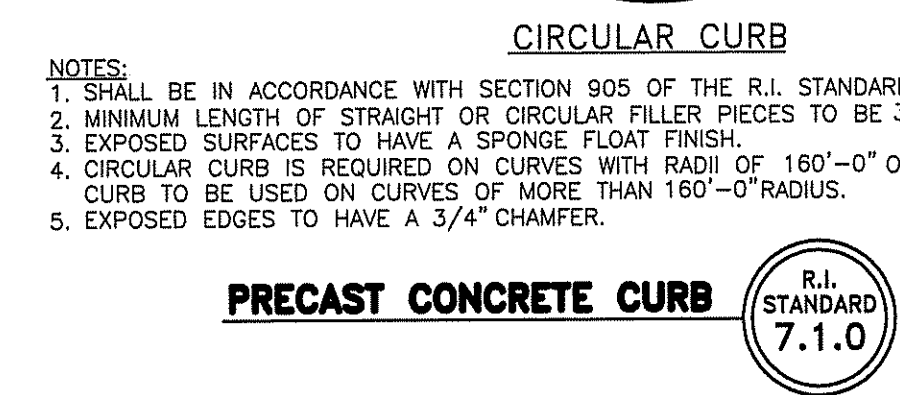
**WHEELCHAIR RAMP**  
MODIFIED STANDARD DETAIL  
R.I. STANDARD 43.3.0



**HANDICAP PAVEMENT MARKING**  
NOT TO SCALE

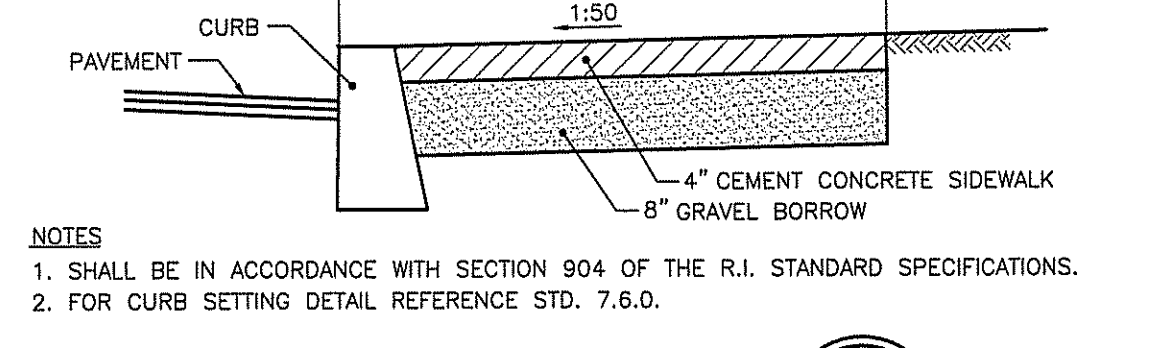


**NOTES:**  
1. DETECTABLE WARNING SYSTEM SHALL BE IN ACCORDANCE WITH SECTION 942 OF THE STANDARD SPECIFICATIONS.  
R.I. STANDARD 48.1.0

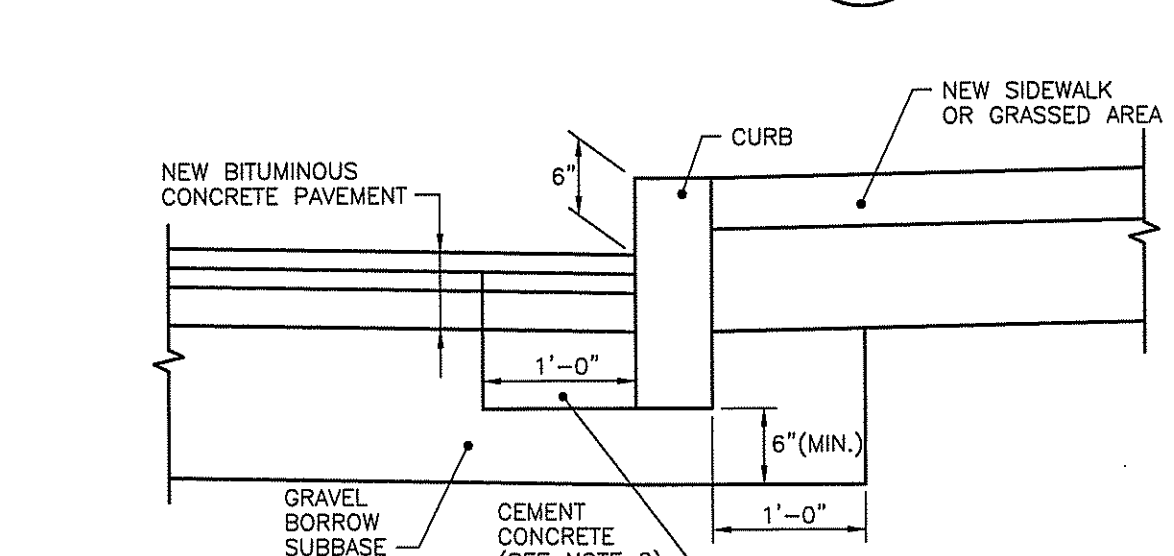


**NOTES:**  
1. SHALL BE IN ACCORDANCE WITH SECTION 905 OF THE R.I. STANDARD SPECIFICATIONS.  
2. MINIMUM LENGTH OF STRAIGHT OR CIRCULAR FILLER PIECES TO BE 3'-0".  
3. EXPOSED SURFACES TO HAVE A SPONGE FLOAT FINISH.  
4. CIRCULAR CURB IS REQUIRED ON CURVES WITH RADI OF 160'-0" OR LESS. STRAIGHT CURB TO BE USED ON CURVES OF MORE THAN 160'-0" RADIUS.  
5. EXPOSED EDGES TO HAVE A 3/4" CHAMFER.  
R.I. STANDARD 7.1.0

**PRECAST CONCRETE CURB**  
R.I. STANDARD 7.1.0

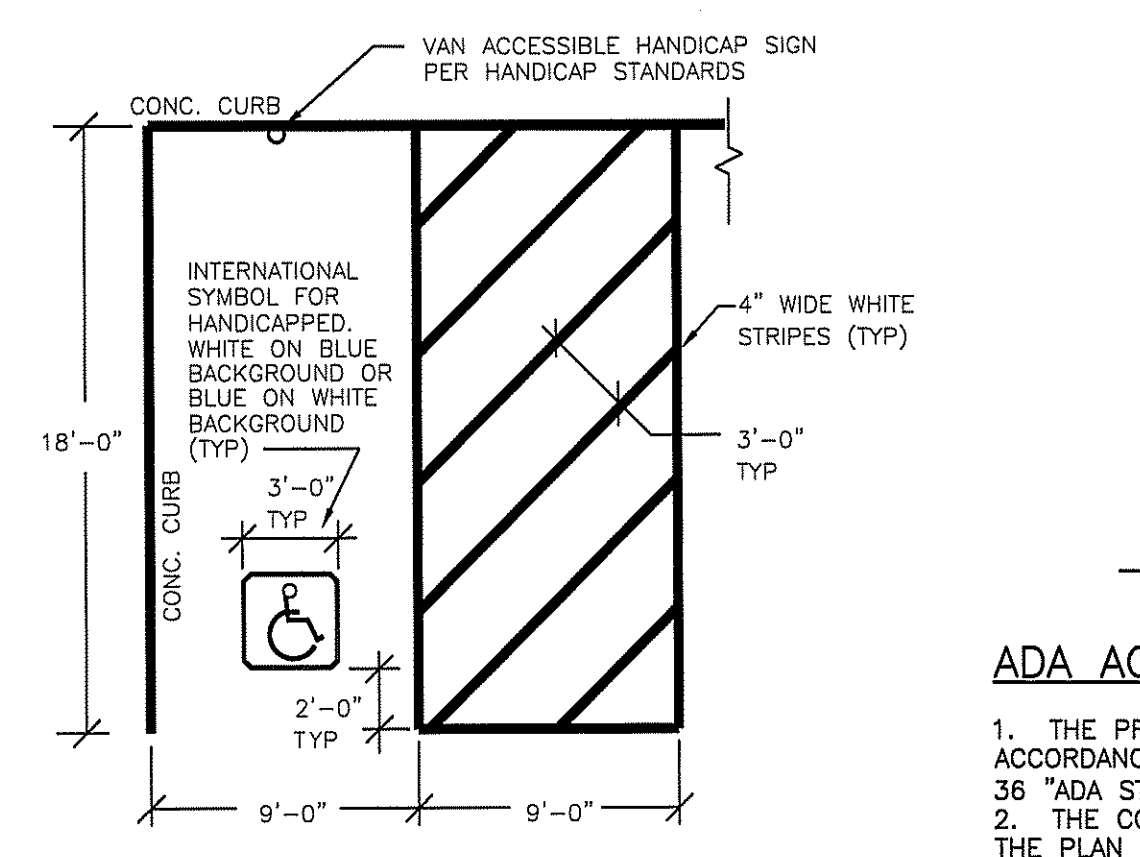


**NOTES:**  
1. SHALL BE IN ACCORDANCE WITH SECTION 904 OF THE R.I. STANDARD SPECIFICATIONS.  
2. FOR CURB SETTING DETAIL REFERENCE STD. 7.6.0.  
R.I. STANDARD 43.1.0



**NOTES:**  
1. SHALL BE IN ACCORDANCE WITH SECTION 905 OF THE R.I. STANDARD SPECIFICATIONS.  
2. CEMENT CONCRETE SHALL BE USED ONLY WHEN THE CURB IS SET AFTER THE BASE AND/OR BINDER COURSES ARE IN PLACE, OTHERWISE THE CEMENT CONCRETE WILL BE ELIMINATED AND THE GRAVEL BROUGHT UP TO BOTTOM OF THE BASE COURSE.  
R.I. STANDARD 7.6.0

**CURB SETTING DETAIL**  
R.I. STANDARD 7.6.0

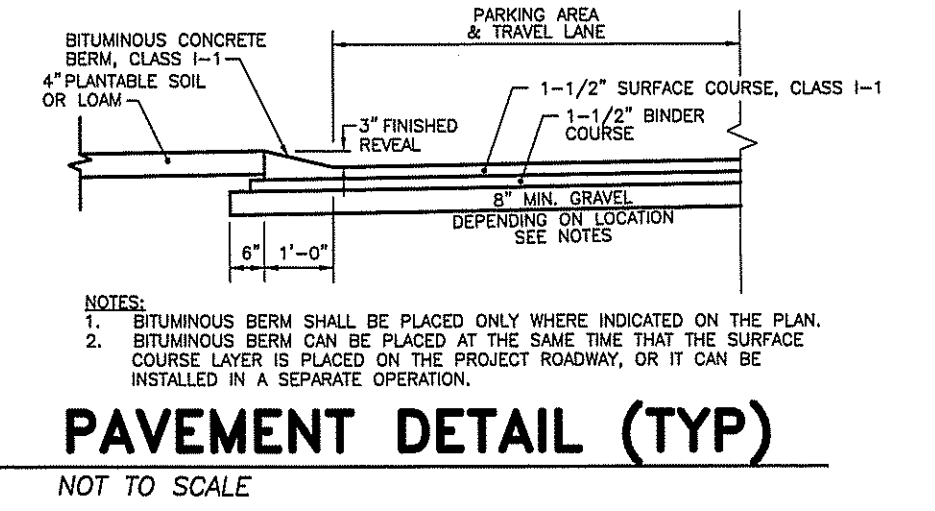


**HANDICAP PARKING SPACE DETAIL**  
NOT TO SCALE

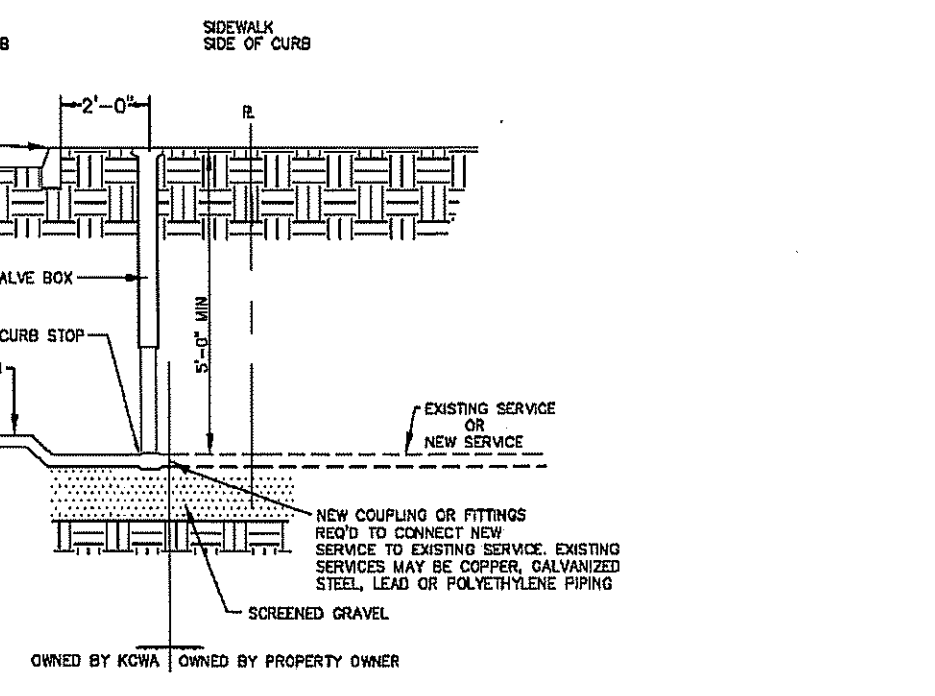


**HANDICAP PARKING SIGN**  
NOT TO SCALE

**ADA ACCESSIBILITY NOTES:**  
1. THE PROJECT IS DESIGNED FOR ADA ACCESSIBILITY IN ACCORDANCE WITH DEPARTMENT OF JUSTICE 28 CFR PART 36 "ADA STANDARDS FOR ACCESSIBLE DESIGN".  
2. THE CONTRACTOR SHALL NOT ALTER THE GRADING ON THE PLAN UNLESS APPROVED BY THE ENGINEER.  
3. ALL WORK SHALL CONFORM TO "ADA STANDARDS FOR ACCESSIBLE DESIGN".  
4. GRADE ADA PARKING AREA AT 2% MAX.

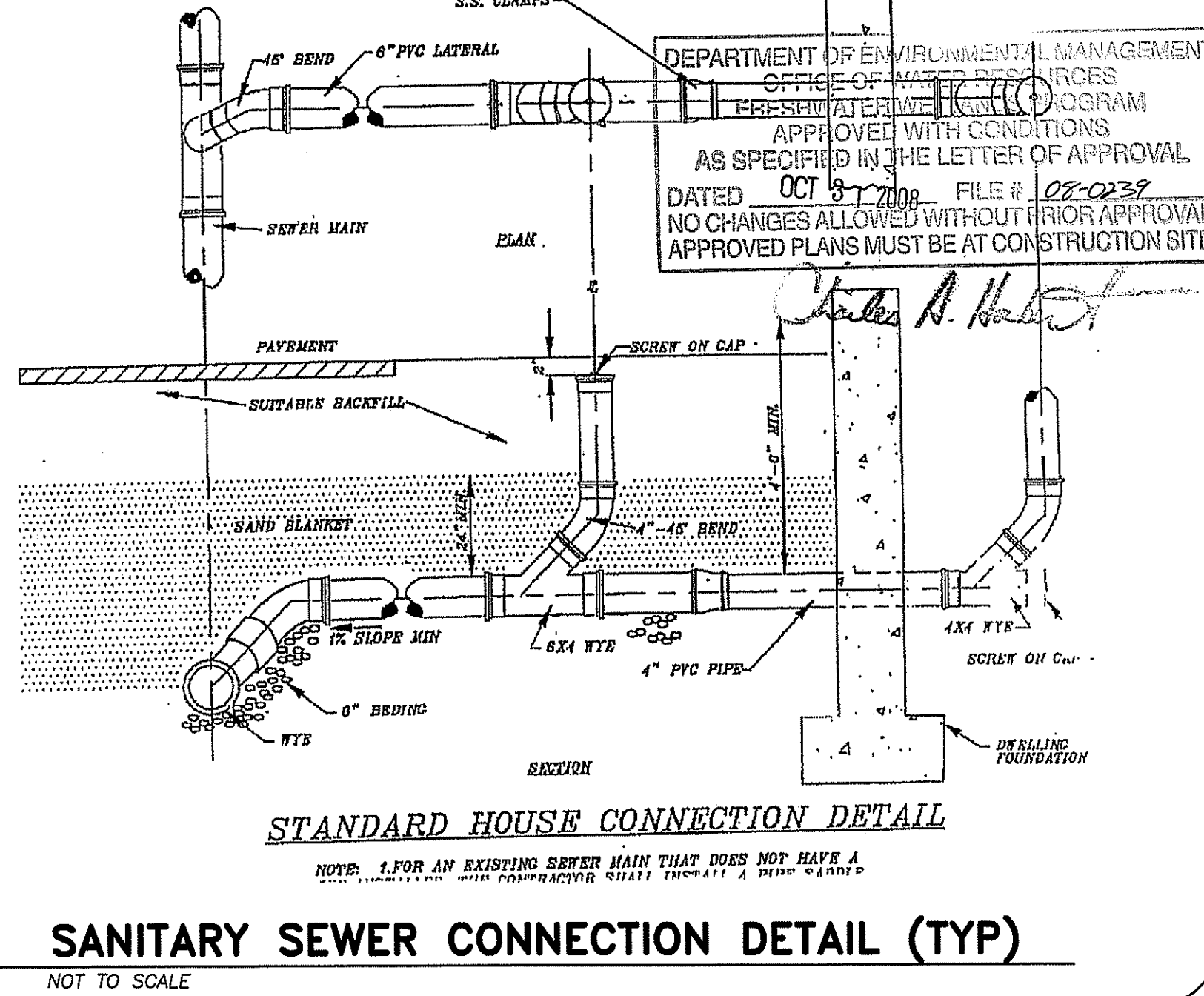


**PAVEMENT DETAIL (TYP)**  
NOT TO SCALE



**NOTES:**  
1. SERVICE MATERIALS PER KCWA SPECIFICATION UNLESS CITY OR TOWN CODES REQUIRE SPECIFIC MATERIALS THAT HAVE BEEN APPROVED BY KCWA.  
2. SERVICE LINE FROM CURB BOX TO BUILDING SHALL BE INSPECTED, TESTED AND APPROVED BY THE LOCAL PLUMBING INSPECTOR.  
R.I. STANDARD 48.1.0

**KCWA SERVICE CONNECTION**  
NOT TO SCALE



**SANITARY SEWER CONNECTION DETAIL (TYP)**  
NOT TO SCALE

Being Assessors Plat No. 30 Lot No. 50  
**DETAILS-3**  
**JBACH REALTY LLC**  
LOCATION: West Warwick Industrial Park  
Crutale Dr. & James P. Murphy Hwy.  
West Warwick, Rhode Island 02893  
PREPARED FOR: Henry DiPietro  
14 Clover Drive  
Covenry, Rhode Island 02816  
OCT 28 2008

Checked By: T.J.B. Date: JUNE 2008  
Scale: AS SHOWN  
REVISIONS  
NO. DATE BY  
1 10/27/08 TJB  
2 10/27/08 TJB

**TJB ENGINEERING, LLC**  
CIVIL ENGINEERING  
PERMITTING \* LAND PLANNING  
SUBDIVISIONS \* WASTEWATER  
1050 MAIN STREET SUITE 30  
EAST GREENWICH, RI 02818  
PHONE: 401-986-1677

**BOYER ASSOCIATES**  
1200 MAIN STREET  
WEST WARWICK, RI 02893  
TEL: (401)821-8872 FAX (401)826-1993

Sheet **7**  
of 7 sheets