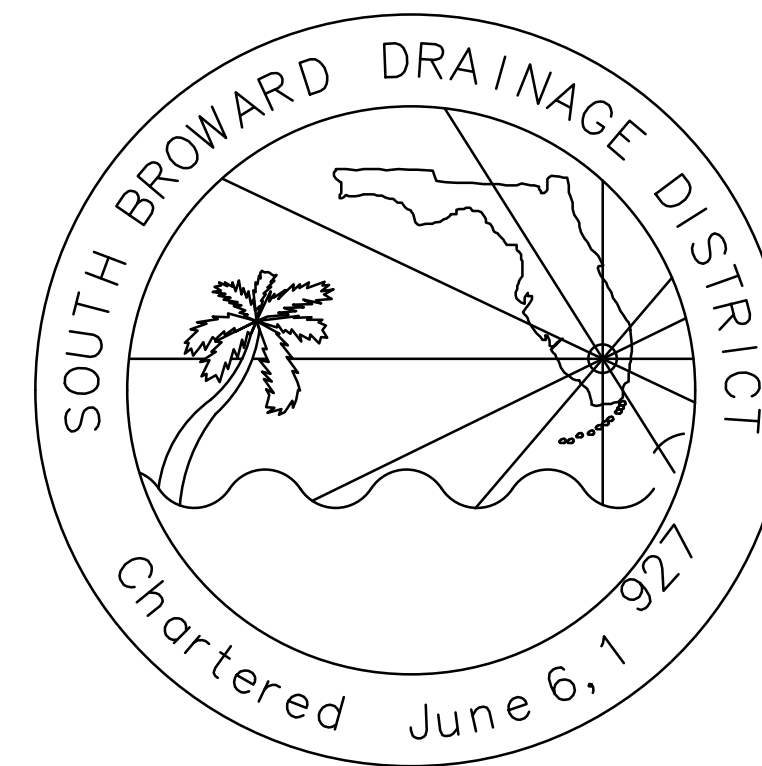
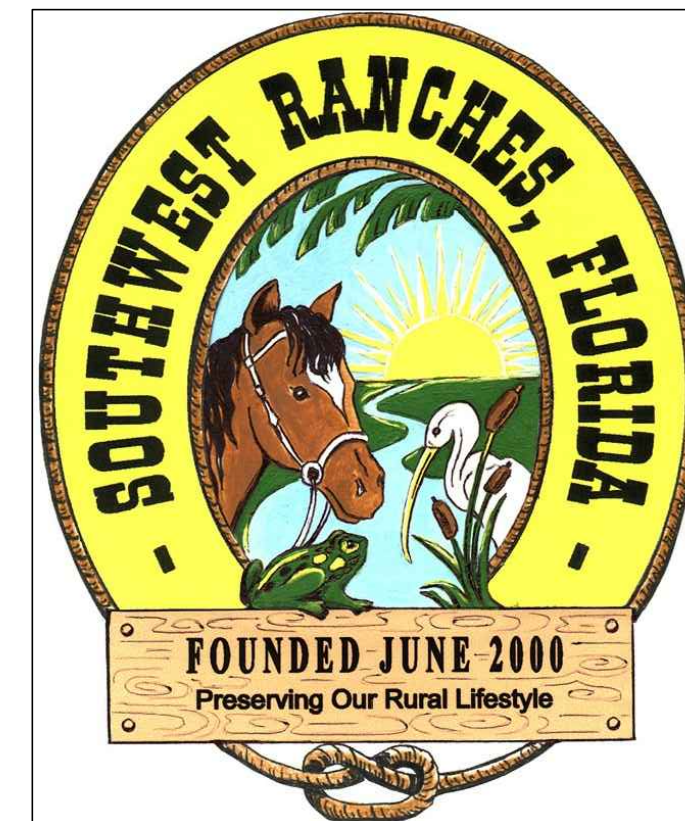


TOWN OF SOUTHWEST RANCHES & SOUTH BROWARD DRAINAGE DISTRICT S.W. 50th PLACE/S.W. 202nd AVENUE DRAINAGE IMPROVEMENTS

TOWN OF SOUTHWEST RANCHES
13400 GRIFFIN ROAD
SOUTHWEST RANCHES, FLORIDA 33330



SOUTH BROWARD DRAINAGE DISTRICT
6591 SW 160th AVE.
SOUTHWEST RANCHES, FLORIDA 33331



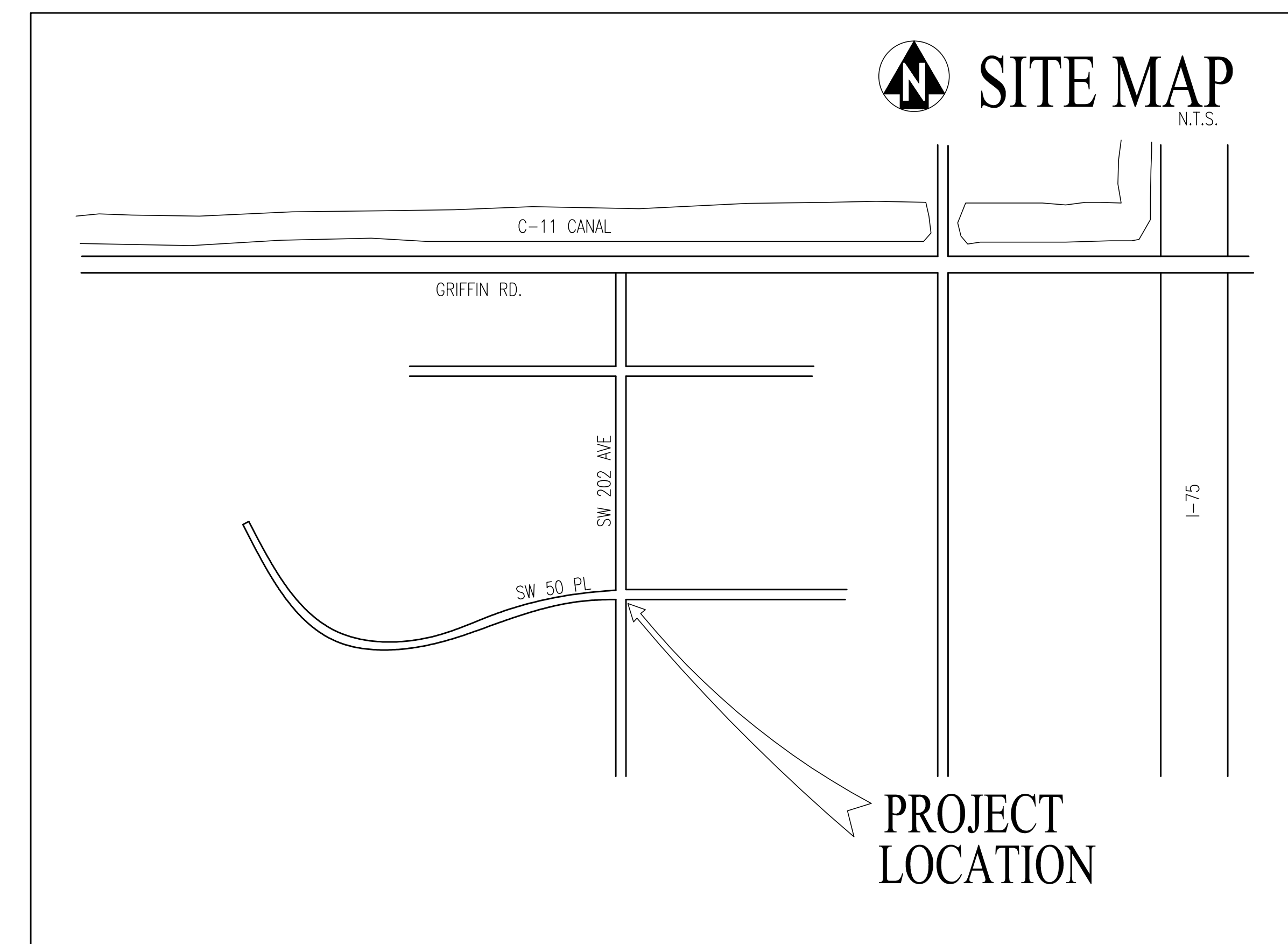
Know what's below.
Call before you dig.

TOWN OF SOUTHWEST RANCHES COUNCIL:

Steve Breitkreuz (Mayor)
Bob Hartman (Vice-Mayor)
Jim Allbritton (Council Member)
Gary Jablonski (Council Member)
David Kuczenski (Council Member)

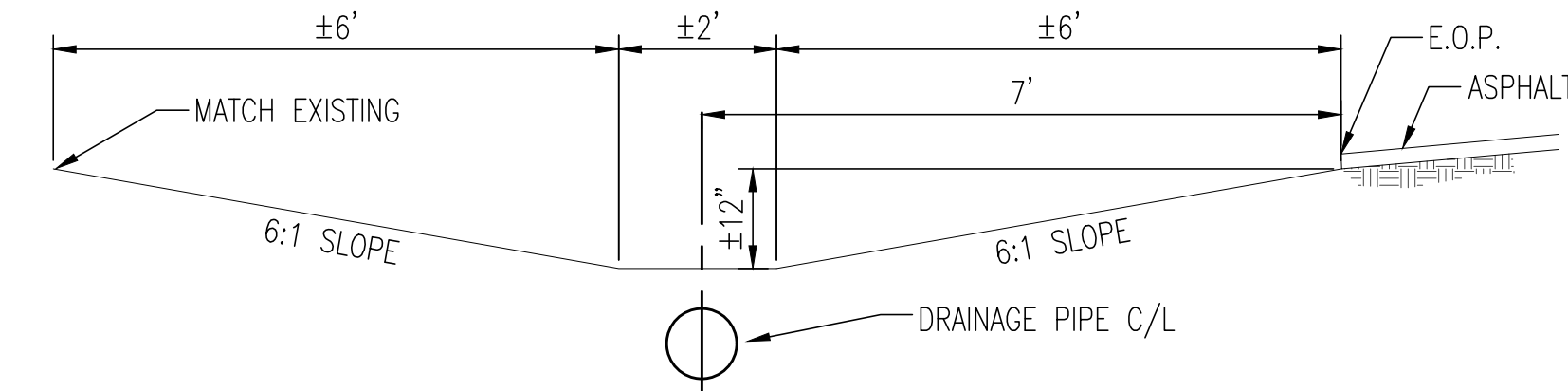
DRAWING INDEX:

COVER SHEET	
50 PI & 202 Ave PAVING & DRAINAGE PLAN	- 1
PAVING & DRAINAGE DETAILS	- 2
50 PI & 202 Ave EROSION CONTROL PLAN	- 3
EROSION CONTROL DETAILS	- 4
SURVEY	- 5



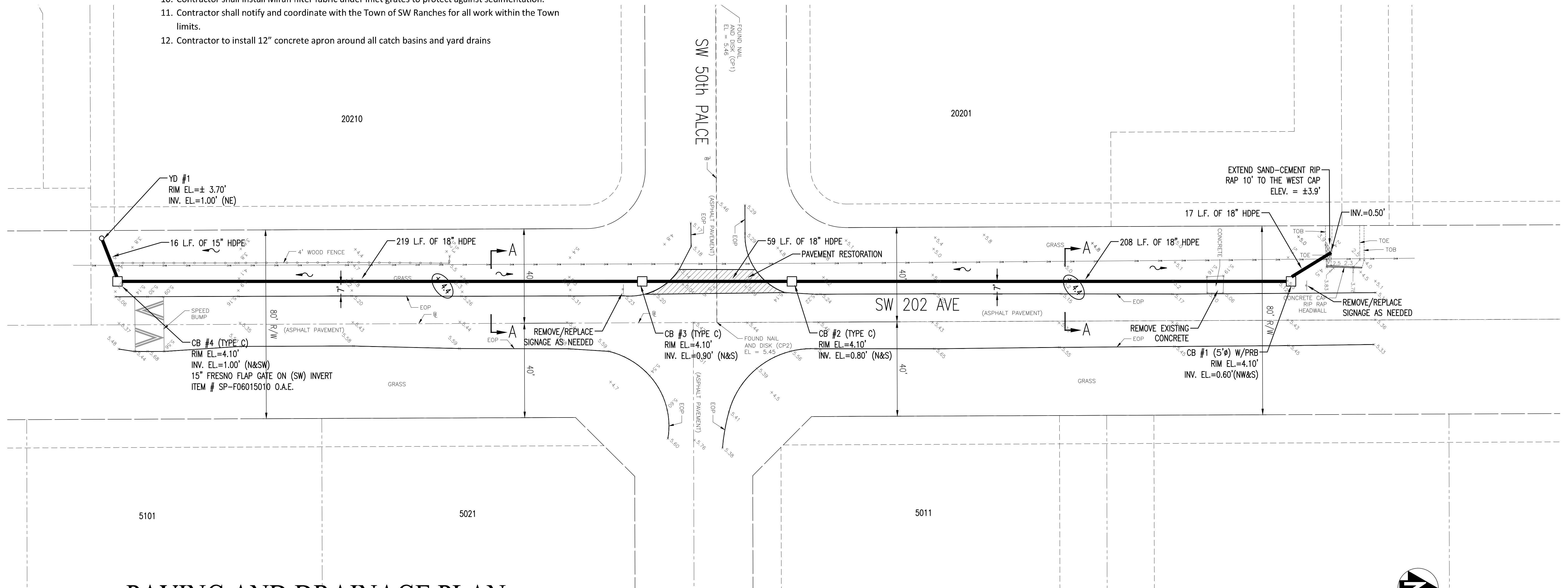
Notes

- All elevations shown on this plan are based on the North American Vertical Datum of 1988 (NAVD 88) is: NAVD 88 = NGVD 29 - 1.51'
- Contractor shall verify the location, size, material, and depth of all existing underground utility lines prior to beginning the work.
- Contractor shall exercise extreme caution when working under and around existing overhead or underground electric lines. Contractor shall notify and coordinate with FPL on any safety or other issues regarding overhead or underground power lines.
- Contractor shall submit a Maintenance of Traffic (MOT) Plan to the Town of SW Ranches for approval for any impacts to the flow of traffic on local Town roads.
- Any required density tests or materials testing shall be paid for by the contractor.
- The limits of the Project areas shall be restored in a manner that meets or exceeds the conditions of the Project areas prior to the start of construction. Sod shall match the type of sod of the surrounding areas unless Bahia is requested by the Town. Contractor shall be responsible for watering of the sod until final acceptance of the work.
- Contractor shall be responsible to completely restore the limits of construction including, but not limited to, sod, pavement, driveways, catch basin aprons, fencing, landscaping and irrigation.
- Contractor shall be responsible to obtain a dewatering permit for the any dewatering activities (at the sole cost to the Contractor).
- Contractor shall comply with all requirements of Section 403.0885, Florida Statutes for NPDES, including, but not limited to, filing a Notice of Intent as applicable.
- Contractor shall install Mirafli filter fabric under inlet grates to protect against sedimentation.
- Contractor shall notify and coordinate with the Town of SW Ranches for all work within the Town limits.
- Contractor to install 12" concrete apron around all catch basins and yard drains

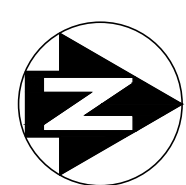


SECTION A-A (TYPICAL SWALE SECTION)

NO SCALE



PAVING AND DRAINAGE PLAN



SCALE: 1"=20'-0"

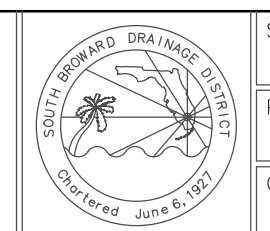
NOTE:
PRIOR TO STARTING CONSTRUCTION, CONTRACTOR SHALL LOCATE AND UNCOVER EXISTING UNDERGROUND CABLE AND POWER LINES TO VERIFY LOCATIONS AND COORDINATE ANY CONFLICTS WITH THE SBDD.

NO	DATE	REVISION	BY	NO	DATE	REVISION	BY
1							

SOUTH BROWARD DRAINAGE DISTRICT
6591 SW 160th AVE.
SOUTHWEST RANCHES, FLORIDA 33331

PAVING AND DRAINAGE PLAN
S.W. 50th PL/S.W.202nd AVE IMPROVEMENT PROJECT
SOUTHWEST RANCHES, FLORIDA

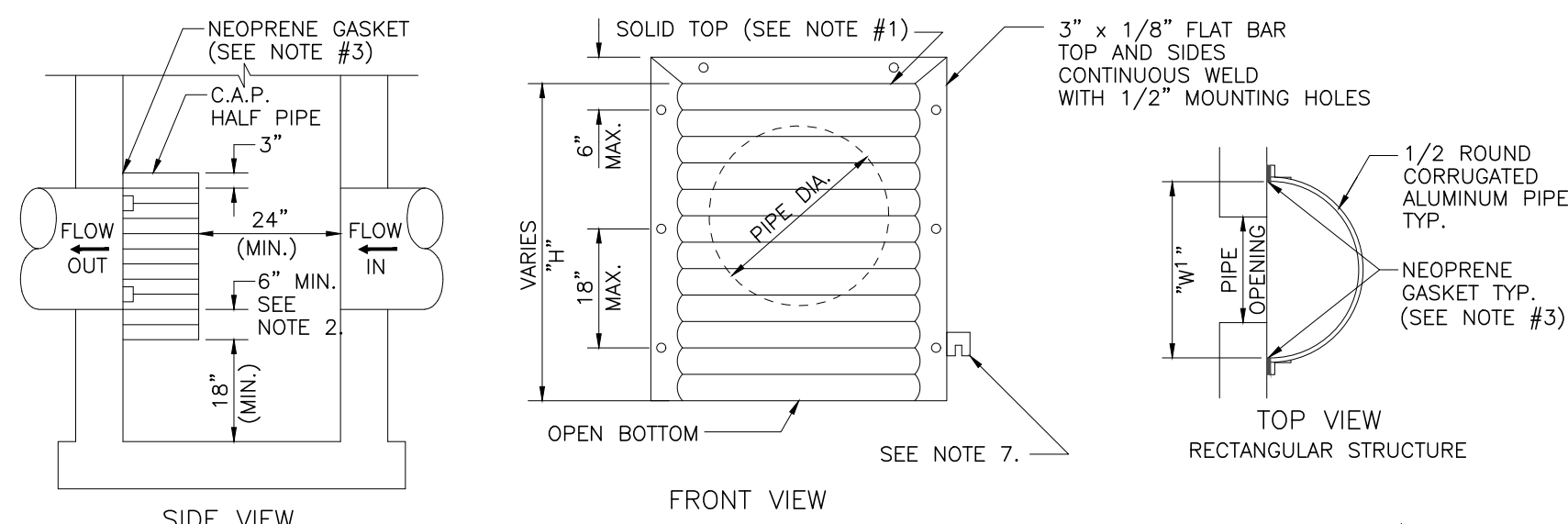
DRAWN BY:
J.K.S.
APPROVED BY:
K.M.H.
DATE: 2-17-20



SCALE: AS NOTED
PROJECT No:
CAD FILE

SHEET

1 OF 5



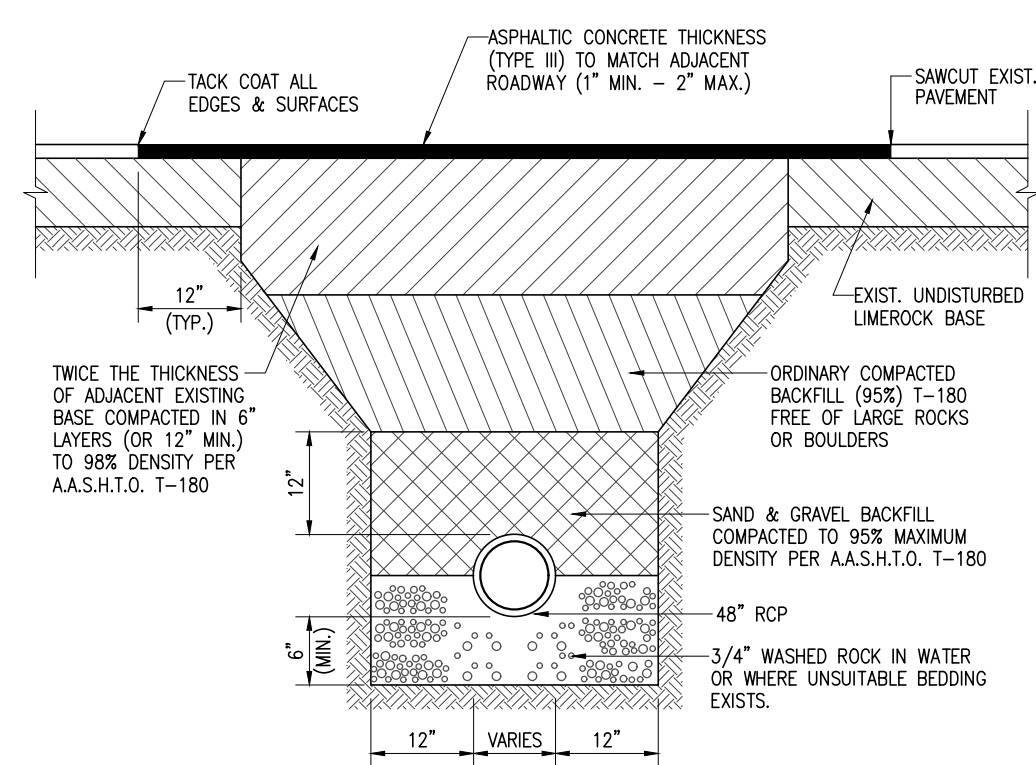
NOTES:

- ALUMINUM SHEET OF SAME THICKNESS (GAUGE) AS PIPE SHALL BE WELDED TO CLOSE OPENING AT THE TOP.
- THE BOTTOM ELEVATION OF THE POLLUTION RETARDANT BAFFLE MUST BE AT LEAST 2' BELOW CONTROL ELEVATION.
- NEOPRENE ADHESIVE BACKED GASKET, OR APPROVED EQUAL (1" x 2") SHALL BE INSTALLED ON THE SIDES AND TOP OF ALL BAFFLES.
- POLLUTION RETARDANT BAFFLE TO BE FASTENED IN PLACE WITH 3/8"x4" STAINLESS STEEL "RED HEADS", OR APPROVED EQUAL.
- ALL EXFILTRATION TRENCHES SHALL HAVE A POLLUTION RETARDANT BAFFLE AT EACH CONNECTION POINT TO A STRUCTURE (SEE EXFILTRATION TRENCH DETAIL).
- FIBERGLASS BAFFLES ARE NOT PERMITTED.
- MOUNTING BRACKETS, MAY BE ADDED TO FLAT BARS TO EASE INSTALLATION IN ROUND STRUCTURES. SPACING TO MATCH HOLES IN FLAT BARS.

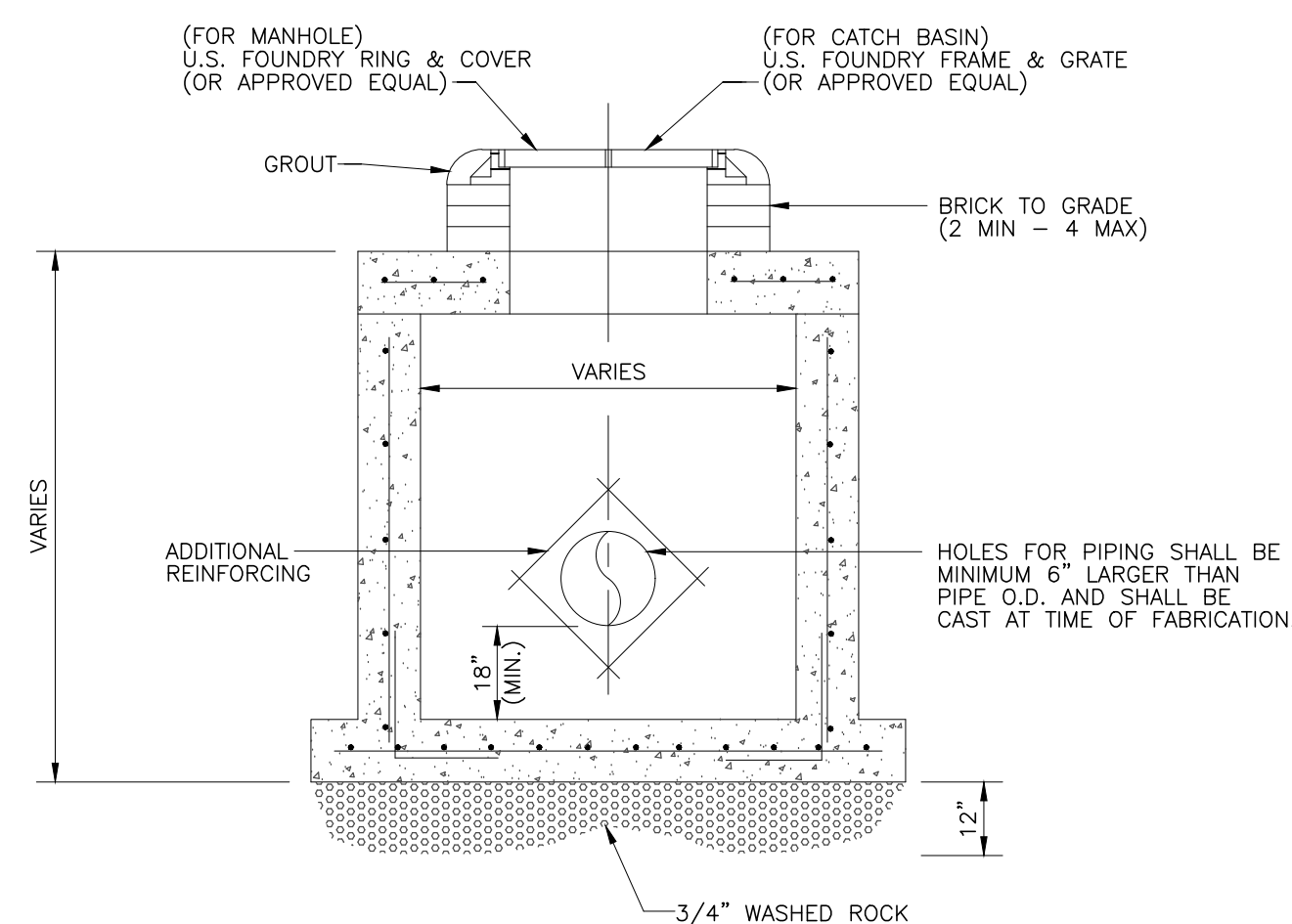
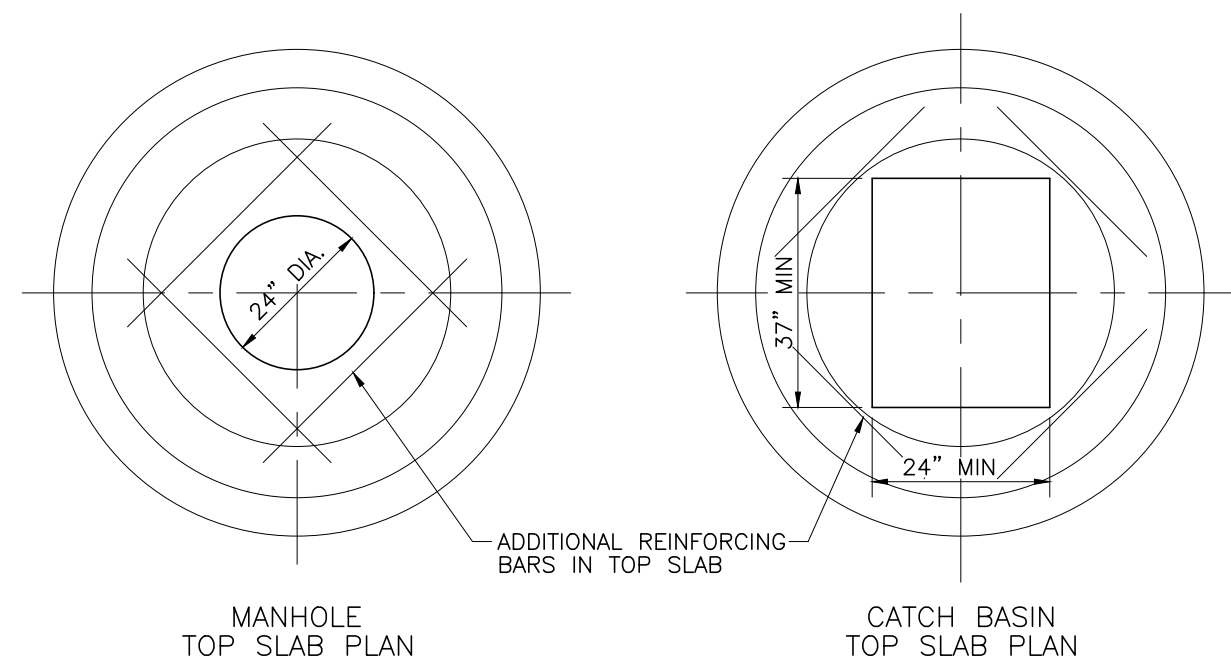
PIPE DIA. (IN)	W ¹ (IN)	W ² (IN)	T (GAUGE) (IN)	H (IN)
15"	21"	21"	16	VARIES
18"	24"	24"	16	VARIES
21"	30"	30"	16	VARIES
24"	30"	36"	16	VARIES
30"	36"	42"	14	VARIES
36"	42"	48"	14	VARIES
42"	48"	54"	14	VARIES
48"	54"	60"	14	VARIES
54"	60"	66"	14	VARIES

1. RECTANGULAR STRUCTURE
2. ROUND STRUCTURE

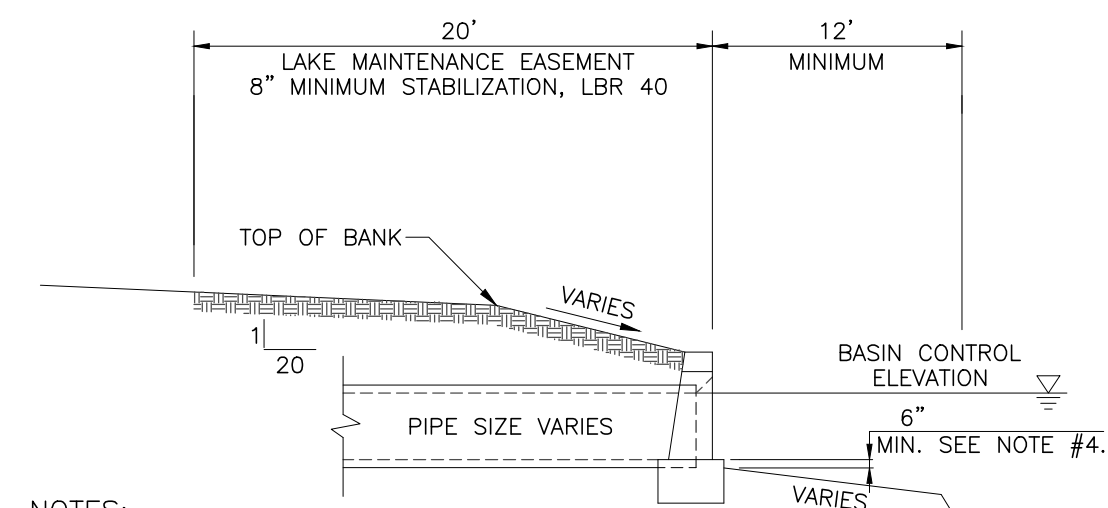
POLLUTION RETARDANT BAFFLE DETAIL



PAVEMENT RESTORATION DETAIL

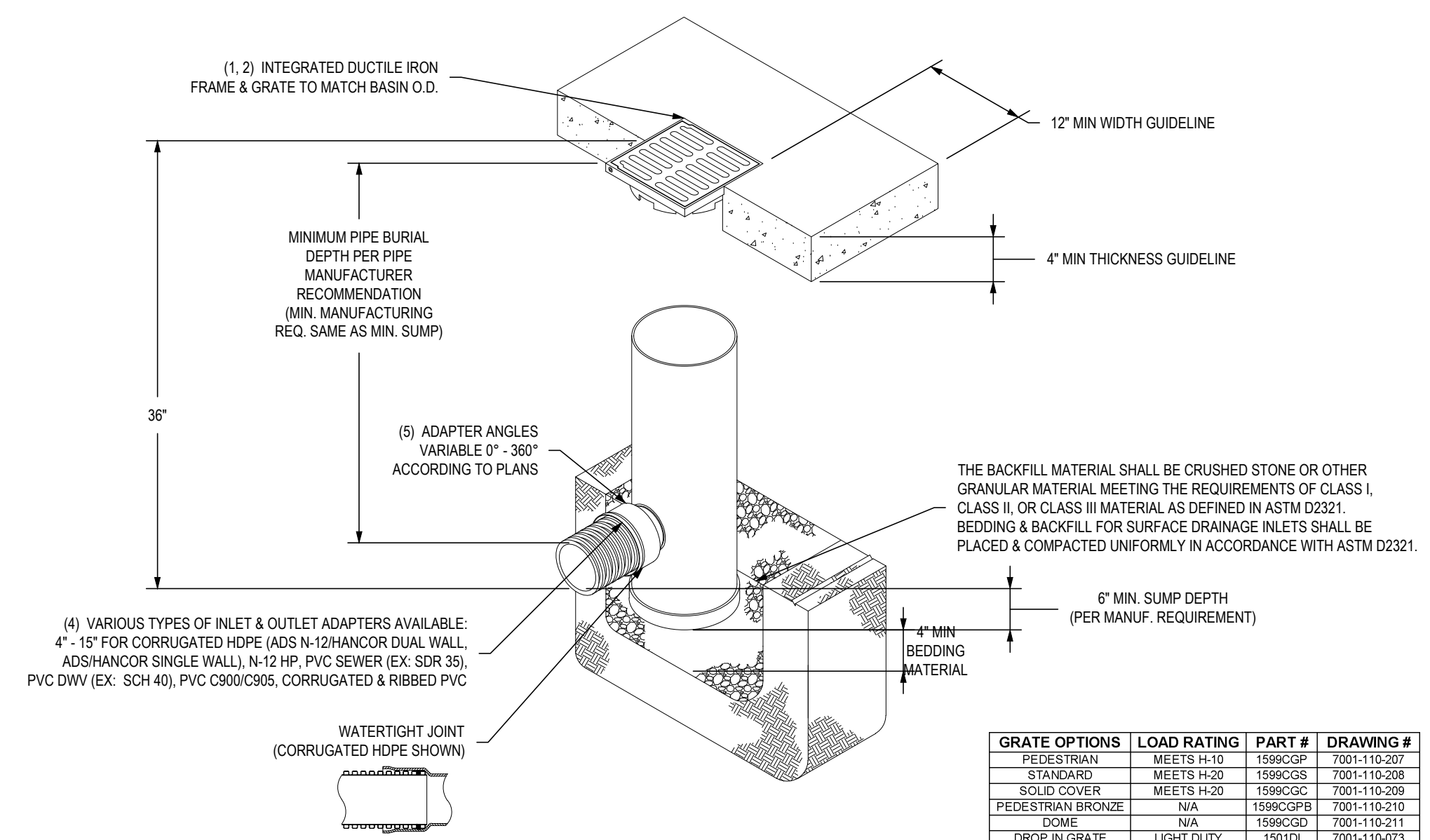


PRECAST CATCH BASIN AND MANHOLE DETAIL



- NOTES:
- TOP OF CAP TO BE 1' ABOVE THE BASIN CONTROL ELEVATION FOR LAKES AND 2' ABOVE BASIN CONTROL ELEVATION FOR CANALS, UNLESS OTHERWISE APPROVED BY THE DISTRICT.
 - REQUIRED FOR ALL LAKE AND CANAL INTERCONNECTS.
 - CONCRETE AND RIP-RAP ENDWALLS ARE ACCEPTED PER FOOT INDEX 250-255 AND INDEX 258 WITH EXCEPTIONS AS NOTED IN SECTION 2.15 OF THE SBDD DESIGN CRITERIA MANUAL.
 - CHANNEL IN FRONT OF PIPE TO BE MIN 6" BELOW THE INVERT OF THE PIPE AND AT LEAST 1 1/2 TIMES THE DIA. OF THE PIPE TO THE DEEP CUT LINE AND CENTERED ON THE PIPE.

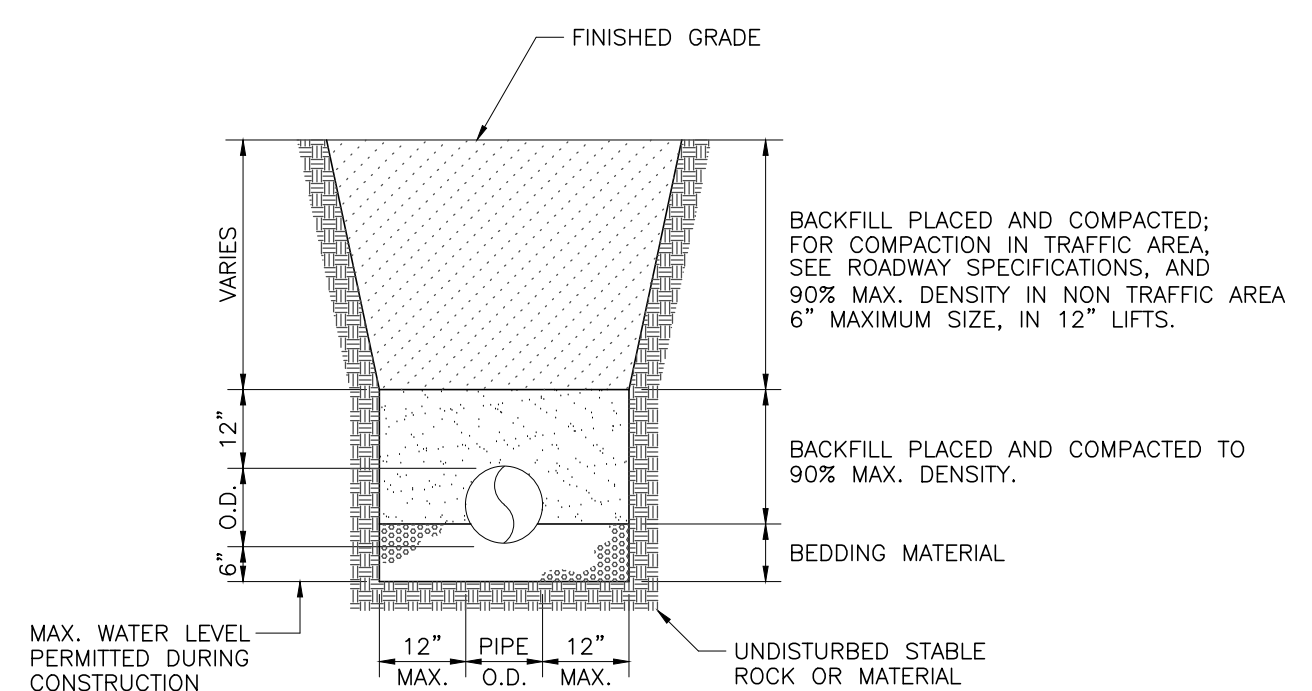
LAKE OUTFALL DETAIL WITH HEADWALL



- GRATES/SOLID COVER SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05, WITH THE EXCEPTION OF THE BRONZE GRATE.
- FRAMES SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05
- DRAIN BASIN TO BE CUSTOM MANUFACTURED ACCORDING TO PLAN DETAILS. RISERS ARE NEEDED FOR BASINS OVER 84" DUE TO SHIPPING RESTRICTIONS. SEE DRAWING NO. 7001-110-065
- DRAINAGE CONNECTION JOINT TIGHTNESS SHALL CONFORM TO ASTM D3212 FOR CORRUGATED HOPE (ADS N-12 HANCOR DUAL WALL, N-12 HP, & PVC SEWER).
- ADAPTERS CAN BE MOUNTED ON ANY ANGLE 0° TO 360°. TO DETERMINE MINIMUM ANGLE BETWEEN ADAPTERS SEE DRAWING NO. 7001-110-012.

15" YARD DRAIN DETAIL

SCALE: NONE



- NOTES:
- WHERE SOIL CONDITION CANNOT BE MAINTAINED AS SHOWN ABOVE, PROVIDE APPROVED MEANS OF CONSTRUCTION.
 - WHERE REQUIRED SHEETING AND SHORING SHALL BE IN ACCORDANCE WITH THE LOCAL GOVERNMENTAL AGENCY.
 - MUCK OR OTHER UNSUITABLE MATERIAL SHALL BE COMPLETELY REMOVED.
 - WHEN THE PIPE IS LAID IN THE PREPARED TRENCH, TRUE TO LINE AND GRADE, THE PIPE BARREL SHALL RECEIVE CONTINUOUS UNIFORM SUPPORT. WHERE NECESSARY, COURSE SAND, PEA ROCK OR 3/4" LIMESTONE GRAVEL SHALL BE USED TO PROVIDE UNIFORM BEDDING.
 - JOINTS MAY BE REQUIRED TO BE WRAPPED AT THE DISCRETION OF THE DISTRICT AND THE SITE CONDITIONS.
 - BACKFILL MATERIAL SHALL BE NON-COHESIVE AND NON-PLASTIC SOIL THAT IS FREE OF ALL DEBRIS, LUMPS, WOOD BROKEN PAVING OR ANY ORGANIC OR UNSUITABLE MATERIAL. BACKFILL MATERIAL PLACED WITHIN 12" OF THE PIPE SHALL CONTAIN NO ROCKS OR STONES LARGER THAN 3-1/2" IN DIAMETER. NO ROCKS OR STONES LARGER THAN 6" IN DIAMETER WILL BE PERMITTED IN THE REMAINING BACKFILL UNLESS OTHERWISE SPECIFIED.
 - TRENCH BACKFILL SHALL BE COMPACTED TO NOT LESS THAN 90 PERCENT OF THE MAXIMUM DRY DENSITY DETERMINED BY AASHTO T-180. BACKFILL AND COMPACTION SHALL BE IN ACCORDANCE TO THE STANDARD ENGINEERING DESIGN REQUIRED BY THE LOCAL GOVERNMENTAL AGENCY.

TRENCH EXCAVATION DETAIL

GENERAL NOTES

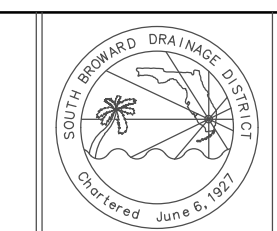
- THE FOLLOWING GENERAL NOTES ARE REQUIRED BY THE SOUTH BROWARD DRAINAGE DISTRICT (SBDD). THEY ARE NOT MEANT TO BE ALL INCLUSIVE. IT IS THE ENGINEER'S RESPONSIBILITY TO ADD ANY NOTES WHICH WILL INFORM THE OWNER AND THE CONTRACTOR OF ANY ADDITIONAL REQUIREMENTS OF SBDD.
- THE CONTRACTOR SHALL CONTACT SBDD 48 HOURS OR TWO (2) WORKING DAYS PRIOR TO ANY REQUIRED INSPECTION. TO SCHEDULE INSPECTIONS, PLEASE CALL SBDD AT (954)680-3337. SBDD'S WORKING HOURS ARE FROM 8:00 AM TO 4:30 PM, MONDAY THROUGH FRIDAY EXCEPT HOLIDAYS.
- ANY REVISIONS TO PLANS PERMITTED BY SBDD MUST BE APPROVED BY SBDD PRIOR TO CONSTRUCTION.
- A PRECONSTRUCTION MEETING SHALL BE SCHEDULED AND HELD AT LEAST FIVE (5) DAYS PRIOR TO BEGINNING CONSTRUCTION.
- A SET OF SHOP DRAWINGS SHALL BE SUBMITTED TO SBDD AFTER APPROVAL BY THE ENGINEER OF RECORD.
- DURING CONSTRUCTION, SBDD PERSONNEL WILL INSPECT THE FOLLOWING:
... INSTALLATION OF ALL UNDERGROUND DRAINAGE FACILITIES BEFORE BACKFILLING,
... BACKFILLING OF DRAINAGE TRENCHES,
... SHAPING OF CANAL AND LAKE BANKS FROM THE DEEP CUT TO THE UPLAND EASEMENT LINE OR AS REQUIRED BY SBDD,
AND ANY OTHER DRAINAGE RELATED CONSTRUCTION WORK.
RE-INSPECTIONS OR EXTRAORDINARY INSPECTIONS WILL BE SUBJECT TO ADDITIONAL FEE CHARGES BY SBDD.
- THE CONTRACTOR CONSTRUCTING OR EXCAVATING LAKES OR OTHER WATER BODIES SHALL EXERCISE EXTREME CAUTION TO ENSURE THAT THE SIDE SLOPES AND DEEP CUT LINES ARE CONSTRUCTED IN ACCORDANCE WITH THE APPROVED PLANS FOR THE DEVELOPMENT. THE CONTRACTOR OR OWNER SHALL PERIODICALLY, OR AS REQUIRED BY SBDD, OBTAIN A SURVEY, FROM A FLORIDA REGISTERED SURVEYOR OF THE LOCATION OF THE DEEP CUT LINES PRIOR TO FORMING THE SIDE SLOPES. THIS SURVEY SHALL BE PERFORMED PRIOR TO THE OWNER/CONTRACTOR BEGINNING CONSTRUCTION OF ANY BUILDING PADS ADJACENT TO THE WATER BODY. IN THE EVENT THAT THE CONTRACTOR OVER DIGS THE WATER BODY, THE OWNER/CONTRACTOR SHALL SUBMIT TO SBDD ITS SOLUTION TO CORRECT THE OVER DIGGING. ANY SUGGESTED REMEDY OR CORRECTION MUST BE APPROVED BY SBDD BEFORE THE CONTRACTOR BEGINS THE PROPOSED CORRECTION/REMEDY.
- PAVING AND DRAINAGE "AS-BUILT" PLANS CERTIFIED BY THE ENGINEER OF RECORD AND APPROVED BY SBDD'S ENGINEER AND DIRECTOR WILL BE REQUIRED BEFORE THE RELEASE OF THE BOND OR LETTER OF CREDIT. AS-BUILTS SHALL BE PROVIDED AS AN OVERLAY OF THE APPROVED CONSTRUCTION DRAWINGS AND AT THE SAME SCALE AS ORIGINALLY SUBMITTED. AS-BUILT SUBMITTALS SHALL CONFORM TO THE REQUIREMENTS OF SECTION SIX (6) OF SBDD'S CRITERIA MANUAL. AS-BUILTS MUST ALSO BE PROVIDED ON AN AUTOCAD DISC.
- AS-BUILT DRAWINGS OF WATER BODIES SHALL INCLUDE THE DATA ADDRESSED IN THE "AS-BUILT LAKE SECTION" IN EXHIBIT 2E OF SBDD'S CRITERIA MANUAL. THE AS-BUILT CROSS SECTIONS SHALL BE PROVIDED AT NOT MORE THAN 100 FOOT INTERVALS AND ALL OUTFALL PIPES CONSTRUCTED WITHOUT HEADWALLS.
- SBDD WILL NOT COMPLETE THE FINAL INSPECTION UNTIL THE AS-BUILT PACKAGE WHICH MUST INCLUDE THE ENGINEER'S CERTIFICATION AND TEST RESULTS FOR STABILIZATION OF LAKE/CANAL MAINTENANCE EASEMENTS, ARE RECEIVED.

NO	DATE	REVISION	BY	NO	DATE	REVISION	BY	NO	DATE	REVISION	BY
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SOUTH BROWARD DRAINAGE DISTRICT
6591 SW 160th AVE.
SOUTHWEST RANCHES, FLORIDA 33331

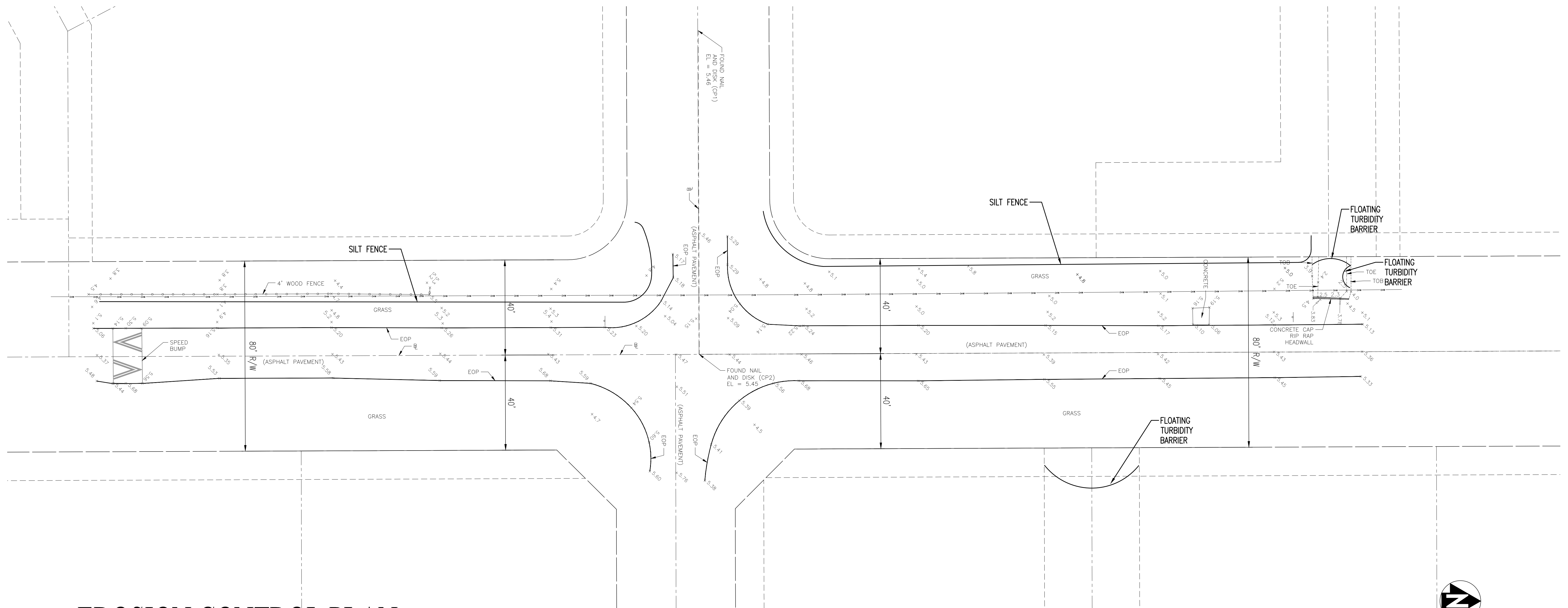
PAVING AND DRAINAGE DETAILS
S.W. 50th PL/S.W.202nd AVE IMPROVEMENT PROJECT
SOUTHWEST RANCHES, FLORIDA

DRAWN BY:
J.K.S.
APPROVED BY:
K.M.H.
DATE 2-17-20

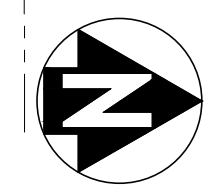


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2 OF 5



EROSION CONTROL PLAN



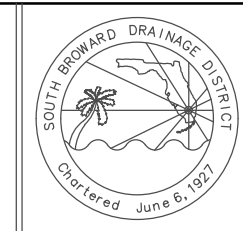
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NO	DATE	REVISION	BY	NO	DATE	REVISION	BY
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SOUTH BROWARD DRAINAGE DISTRICT
 6591 SW 160th AVE.
 SOUTHWEST RANCHES, FLORIDA 33331

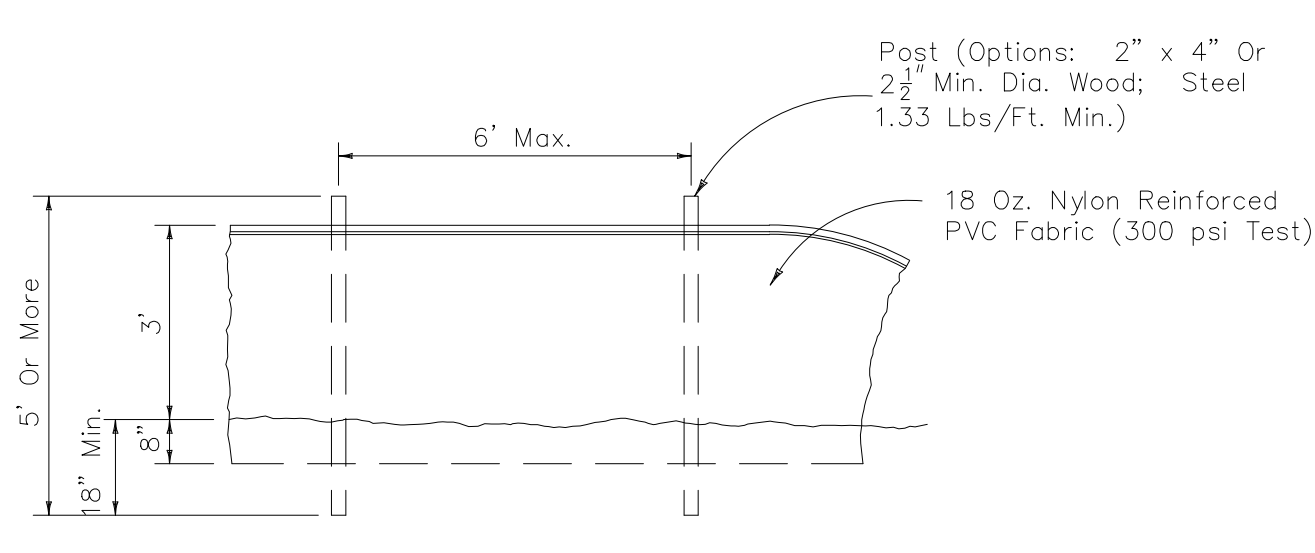
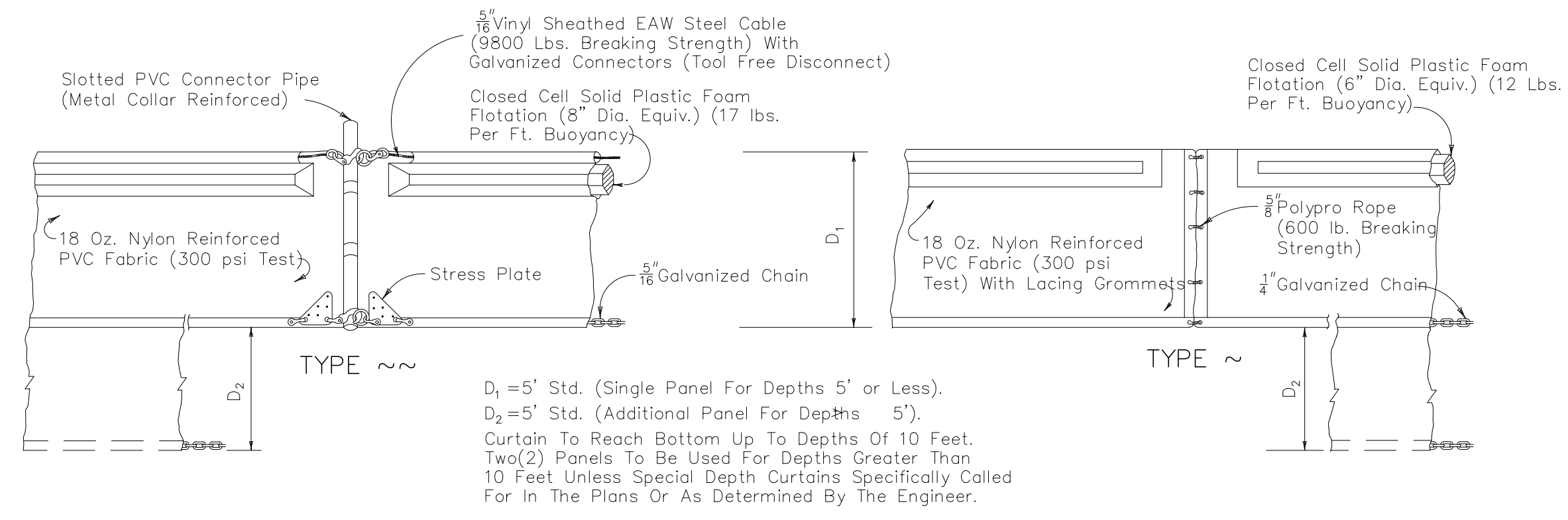
EROSION CONTROL PLAN
 S.W. 50th PL/S.W.202nd AVE IMPROVEMENT PROJECT
 SOUTHWEST RANCHES, FLORIDA

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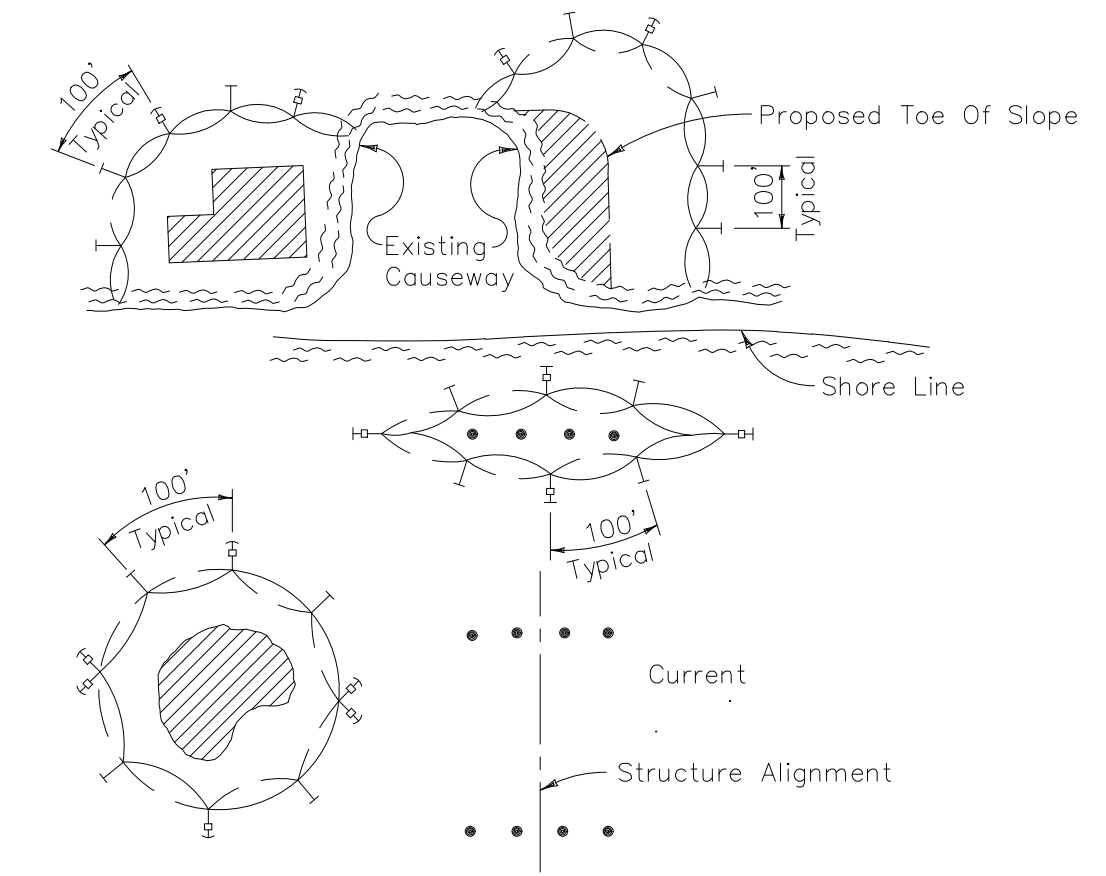
SHEET
 3 OF 5



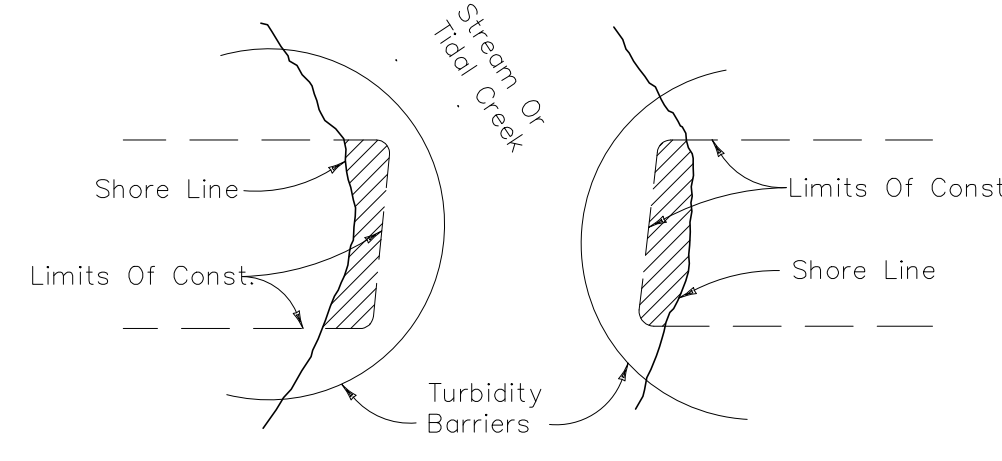
STAKED TURBIDITY BARRIER

NOTICE: COMPONENTS OF TYPES ~ AND ~ MAY BE SIMILAR OR IDENTICAL TO PROPRIETARY DESIGNS. ANY INFRINGEMENT ON THE PROPRIETARY RIGHTS OF THE DESIGNER SHALL BE THE SOLE RESPONSIBILITY OF THE USER. SUBSTITUTIONS FOR TYPES ~ AND ~ SHALL BE AS APPROVED BY THE ENGINEER.

FLOATING TURBIDITY BARRIERS



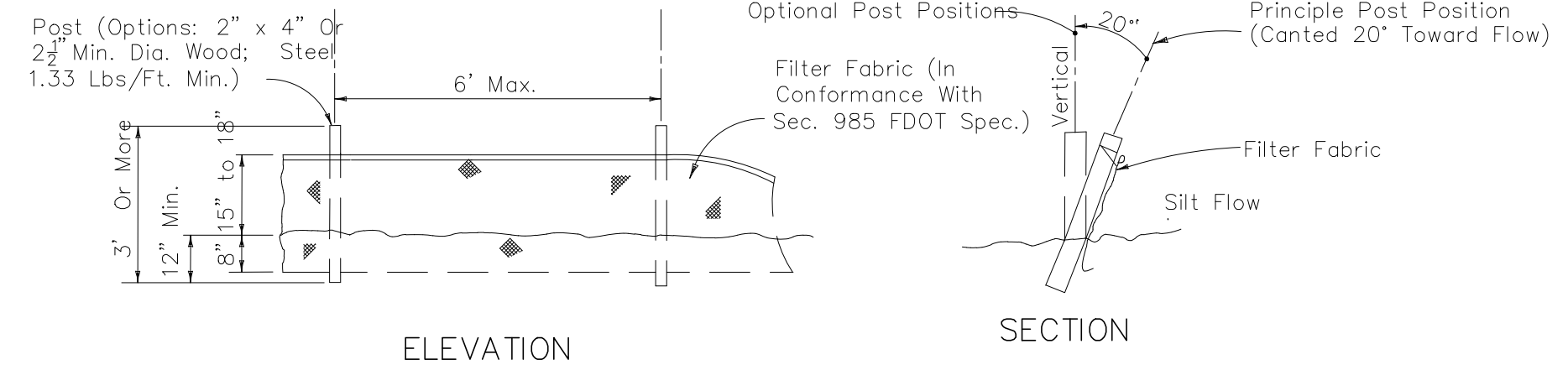
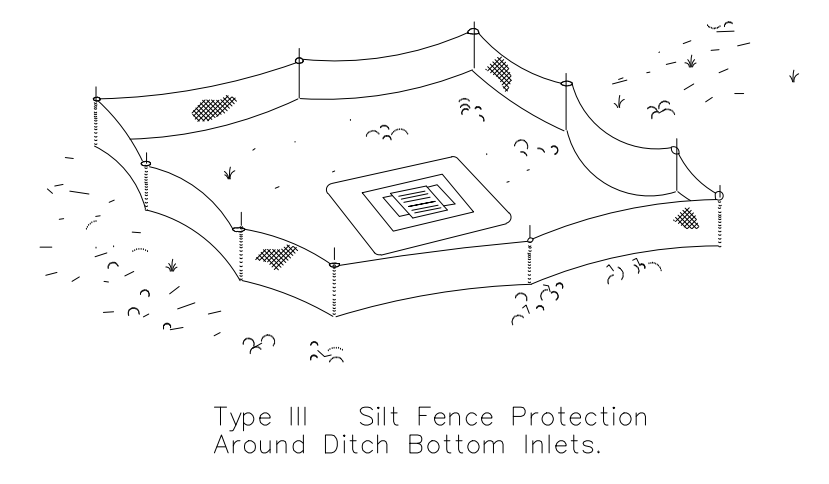
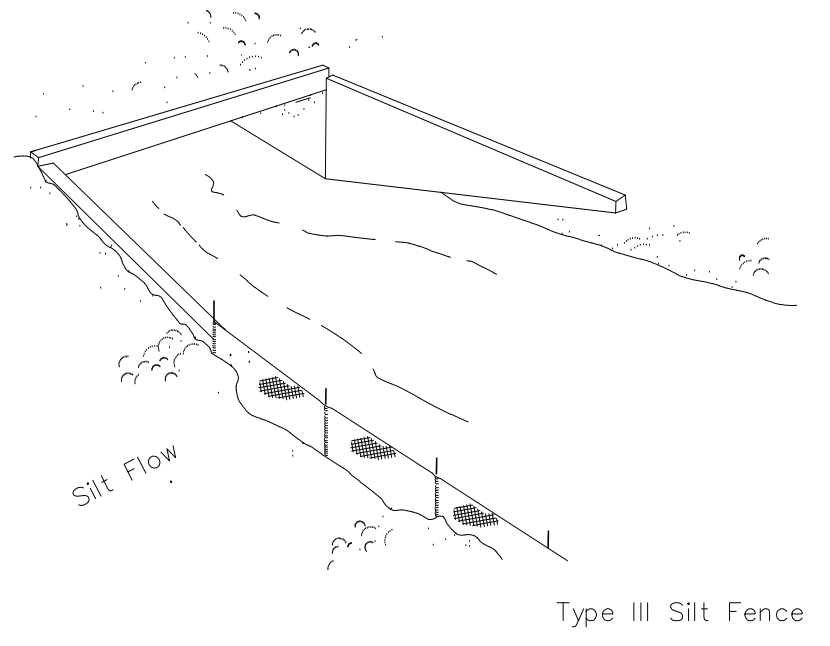
- LEGEND**
- Pile Locations
 - ▨ Dredge Or Fill Area
 - Mooring Buoy w/Anchor
 - Anchor
 - Barrier Movement Due To Current Action



- NOTES:**
1. Turbidity barriers are to be used in all permanent bodies of water regardless of water depth.
 2. Number and spacing of anchors dependent on current velocities.
 3. Deployment of barrier around pile locations may vary to accommodate construction operations.
 4. Navigation may require segmenting barrier during construction operations.
 5. For additional information see Section 104 of the Standard Specifications.

Note: Turbidity barriers for flowing streams and tidal creeks may be either floating, or staked types or any combinations of types that will suit site conditions and meet erosion control and water quality requirements. The barrier type(s) will be at the Contractors option unless otherwise specified in the plans, however payment will be under the pay item(s) established in the plans for Floating Turbidity Barrier and/or Staked Turbidity Barrier. Posts in staked turbidity barriers to be installed in vertical position unless otherwise directed by the Engineer.

TURBIDITY BARRIER APPLICATIONS



Note: Silt Fence to be paid for under the contract unit price for Staked Silt Fence (LF).

TYPE III SILT FENCE

SILT FENCE APPLICATIONS

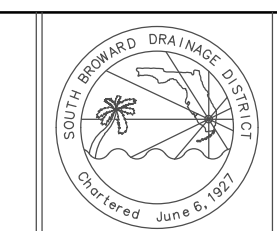
Do not deploy in a manner that silt fences will act as a dam across permanent flowing watercourses. Silt fences are to be used at upland locations and turbidity barriers used at permanent bodies of water.

NO	DATE	REVISION	BY	NO	DATE	REVISION	BY
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SOUTH BROWARD DRAINAGE DISTRICT
6591 SW 160th AVE.
SOUTHWEST RANCHES, FLORIDA 33331

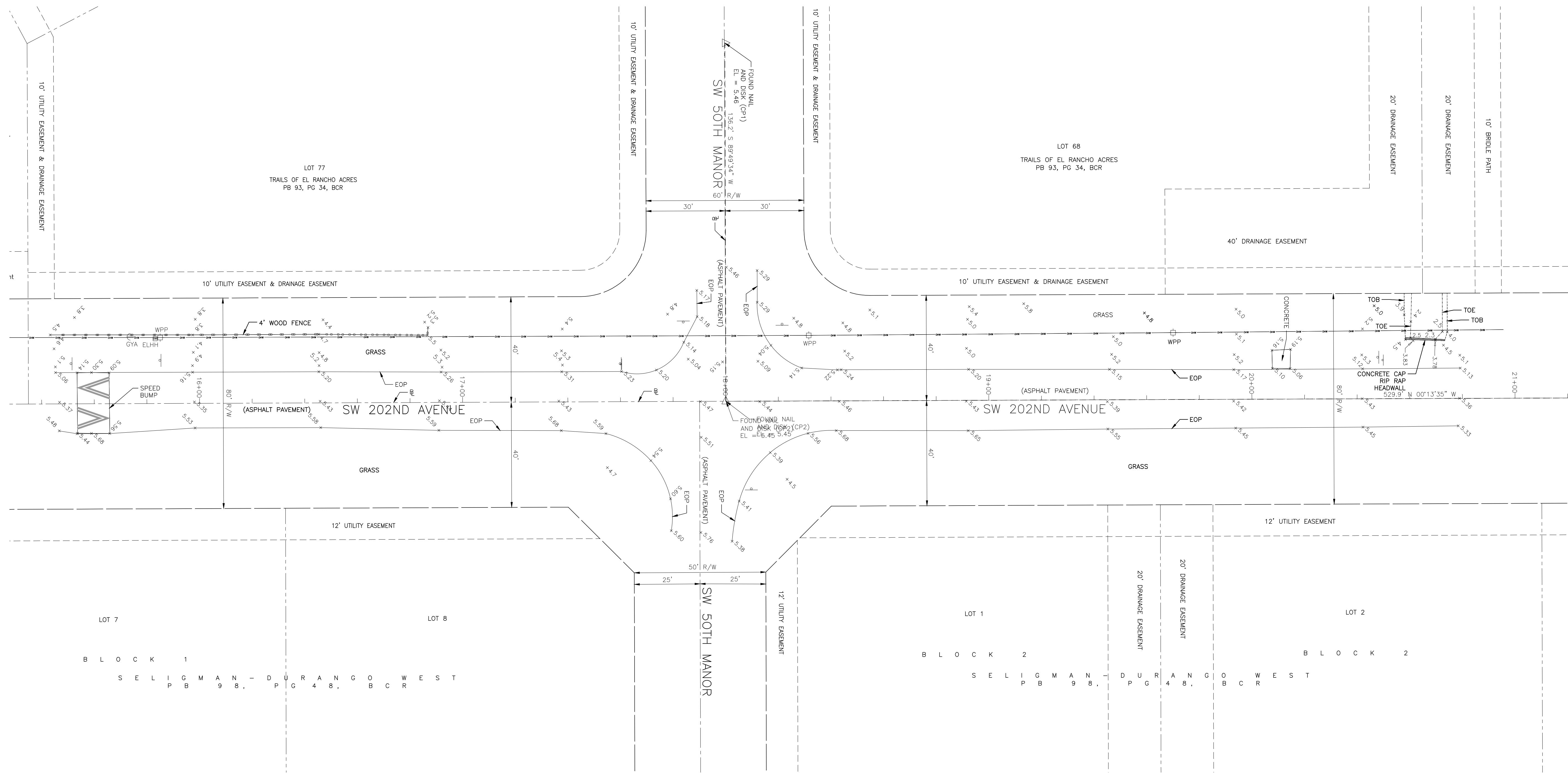
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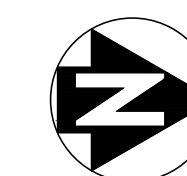


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4 OF 5



SURVEY PLAN



SCALE: 1"=20'-0"

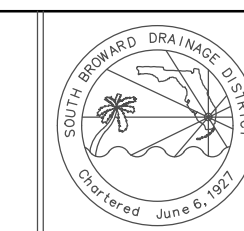
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SOUTH BROWARD DRAINAGE DISTRICT
6591 SW 160th AVE.
SOUTHWEST RANCHES, FLORIDA 33331

SURVEY PLAN
S.W. 50th PL/S.W.202nd AVE IMPROVEMENT PROJECT
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PROJECT No
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5 OF 5