



# CITY of NOVI CITY COUNCIL

**Agenda Item 4  
August 28, 2017**

**SUBJECT:** Approval to award a construction contract for the Pavilion Shore Additional Parking Lot project to Fonson Company, Inc., the low-bidder, in the amount of \$200,414.00 subject to final review and approval of the form and agreement by the City Manager's office and the City Attorney.

**SUBMITTING DEPARTMENT:** Department of Public Services, Engineering Division

**CITY MANAGER APPROVAL:** 

<b>EXPENDITURE REQUIRED</b>	<b>\$ 200,414.00</b>
<b>AMOUNT BUDGETED</b>	<b>\$ 27,659.00 (FY 2016-17 BUDGET ROLLOVER)</b> <b>\$ 311,700.00 (FY 2017-18 BUDGET)</b>
<b>LINE ITEM NUMBER</b>	<b>400-691.00-981.008</b>

**BACKGROUND INFORMATION:**

The City of Novi will construct additional parking spots at the south end of the existing eastern parking lot of Pavilion Shore Park. The east lot was constructed, initially, with a capacity of 20 spots in 2013. Combined with the 10 spots from the west parking lot, the park will now have over twice as many parking spaces available. As amenities are continually being added, popularity of the park's existence is spreading and various PRCS' events on-site are being attended by more than 100 people at a time therefore, the park has seen an increasing demand for parking spaces.

AECOM (URS Corporation-Great Lakes) assisted City staff to develop the engineering plans for this project. The plans were advertised for public bid on July 26, 2017. Three bids were received and opened on August 17, 2017 following the solicitation period. The low bidder was Fonson Company. Their bid was recommended as being in the best interest of the City as it is responsive and complies with all of the requirements of the bidding instructions. The award recommendation letter including the bid tab is attached.

A summary of the bid follows:

<b>Contractor</b>	<b>Base Bid (including Crew Days)*</b>
Fonson Company	\$216,414.00
Best Asphalt	\$228,219.00
Nagle Paving	\$253,647.00

**\*Crew Days are included to compare bids, but are not included in the award.**

It is anticipated that this project will be substantially complete by the fall of 2017 with final completion and restoration by late fall of 2017.

**RECOMMENDED ACTION:** Approval to award a construction contract for the Pavilion Shore Additional Parking Lot project to Fonson Company, Inc., the low-bidder, in the amount of \$200,414.00 subject to final review and approval of the form and agreement by the City Manager's office and the City Attorney.

# Pavillion Shore Park Additional Parking Lot

Location Map





Map Author: J. Mathias  
Date: 5/24/17

Amended By:  
Date:  
Department:

#### MAP INTERPRETATION NOTICE

Map information depicted is not intended to replace or substitute for any official or primary source. This map was intended to meet National Map Accuracy Standards and use the most recent, accurate sources available to the people of the City of Novi. Boundary measurements and area calculations are approximate and should not be construed as survey measurements performed by a licensed Michigan Surveyor as defined in Michigan Public Act 132 of 1970 as amended. Please contact the City GIS Manager to confirm source and accuracy information related to this map.

#### Legend

-  Proposed Parking Lot
-  Proposed Sidewalk



**City of Novi**

Engineering Division  
Department of Public Services  
26300 Lee BeGole Drive  
Novi, MI 48375  
cityofnovi.org



1 inch = 104 feet





August 18, 2017

Mr. Joey Mathias  
City of Novi  
Engineering Department  
26300 Lee BeGole Drive  
Novi, MI 48375

Reference: Bid Analysis and Contract Award Recommendation  
Pavilion Shore Parking Lot Addition  
AECOM Project Number 60547637

Dear Mr. Mathias:

Attached is the Bid Tabulation for the above referenced project. Three bids were received and opened. This bid was less than the Engineer's Estimate. There were no irregularities in the bids.

The low bidder, Fonson Company, Inc., has successfully completed similar projects in Novi, Brighton, and Monroe County for the Michigan Department of Transportation. We also contacted references and they have performed satisfactorily on these projects. The bonding company listed in the Statement of Qualifications (Hylant Group, Inc., Lisa Wilmot is the agent) has a rating that exceeds the minimum requirements.

We recommend award of the contract to Fonson Company, Inc., for the Bid Amount, excluding crew day costs, of \$200,414.00.

Please feel free to contact me if you need anything else or wish to discuss the project.

Sincerely,

A handwritten signature in blue ink that reads 'Sean Kelsch'.

Sean Kelsch, P.E.  
Project Manager

cc: George D. Melistas, City of Novi  
Mark Koskinen, AECOM

**City of Novi  
Pavilion Shore Parking Lot Addition  
Bid Tabulation  
8/18/2017**

Item No.	Item Description	Unit	As Directed	Road	Total	Engineer's Estimate		Fonson Company		Best Asphalt		Nagle Paving	
						Unit Price (\$)	Total Cost	Unit Price (\$)	Total Cost	Unit Price (\$)	Total Cost	Unit Price (\$)	Total Cost
1	Mobilization (10%)	LSUM	1		1	20,837.88	\$ 20,837.88	\$ 15,500.00	\$ 15,500.00	\$ 21,000.00	\$ 21,000.00	\$ 20,000.00	\$ 20,000.00
2	Pre-Construction Audio-Visual	LSUM	1		1	\$ 1,000.00	\$ 1,000.00	\$ 925.00	\$ 925.00	\$ 1,000.00	\$ 1,000.00	\$ 1,250.00	\$ 1,250.00
3	Stump, Rem, 6 inch to 18 inch	Ea	21	9	30	\$ 200.00	\$ 6,000.00	\$ 100.00	\$ 3,000.00	\$ 200.00	\$ 6,000.00	\$ 120.00	\$ 3,600.00
4	HMA Surface, Rem	Syd	10	10	20	\$ 20.00	\$ 400.00	\$ 42.00	\$ 840.00	\$ 10.00	\$ 200.00	\$ 20.00	\$ 400.00
5	Curb and Gutter, Rem	Ft		60	60	\$ 12.00	\$ 720.00	\$ 10.30	\$ 618.00	\$ 5.00	\$ 300.00	\$ 20.00	\$ 1,200.00
6	Masonry and Conc Structure, Rem	Cyd	50		50	\$ 80.00	\$ 4,000.00	\$ 92.00	\$ 4,600.00	\$ 50.00	\$ 2,500.00	\$ 120.00	\$ 6,000.00
7	Subgrade Undercutting, Type II	Cyd	225		225	\$ 45.00	\$ 10,125.00	\$ 40.00	\$ 9,000.00	\$ 55.00	\$ 12,375.00	\$ 60.00	\$ 13,500.00
8	Grading	Syd		1750	1750	\$ 10.00	\$ 17,500.00	\$ 7.60	\$ 13,300.00	\$ 10.00	\$ 17,500.00	\$ 12.00	\$ 21,000.00
9	Erosion Control, Silt Fence	Ft	300		300	\$ 2.00	\$ 600.00	\$ 3.50	\$ 1,050.00	\$ 2.00	\$ 600.00	\$ 5.00	\$ 1,500.00
10	Erosion Control, Inlet Protection, Fabric Drop	Ea	5		5	\$ 150.00	\$ 750.00	\$ 120.00	\$ 600.00	\$ 100.00	\$ 500.00	\$ 150.00	\$ 750.00
11	Aggregate Base, 21AA, Limestone, 8-inch	Syd		1600	1600	\$ 13.00	\$ 20,800.00	\$ 12.75	\$ 20,400.00	\$ 11.00	\$ 17,600.00	\$ 13.50	\$ 21,600.00
12	Aggregate Surface Cse, Limestone, 10-inch	Syd		20	20	\$ 20.00	\$ 400.00	\$ 49.50	\$ 990.00	\$ 12.00	\$ 240.00	\$ 40.00	\$ 800.00
13	Dr Structure Cover, Adj, Case 1	Ea		1	1	\$ 500.00	\$ 500.00	\$ 1,580.00	\$ 1,580.00	\$ 500.00	\$ 500.00	\$ 500.00	\$ 500.00
14	Sewer, CI E, 12 inch	Ft		165	165	\$ 32.00	\$ 5,280.00	\$ 47.50	\$ 7,837.50	\$ 70.00	\$ 11,550.00	\$ 90.00	\$ 14,850.00
15	Sewer Tap, 12 inch	Ea		1	1	\$ 500.00	\$ 500.00	\$ 310.00	\$ 310.00	\$ 500.00	\$ 500.00	\$ 600.00	\$ 600.00
16	Dr Structure, 24 inch dia	Ea	1	1	2	\$ 1,500.00	\$ 3,000.00	\$ 1,650.00	\$ 3,300.00	\$ 3,000.00	\$ 6,000.00	\$ 1,560.00	\$ 3,120.00
17	Dr Structure, 48 inch dia	Ea	1	2	3	\$ 2,000.00	\$ 6,000.00	\$ 2,100.00	\$ 6,300.00	\$ 5,000.00	\$ 15,000.00	\$ 2,160.00	\$ 6,480.00
18	Dr Structure Cover, Type B	Ea	1	1	2	\$ 500.00	\$ 1,000.00	\$ 475.00	\$ 950.00	\$ 600.00	\$ 1,200.00	\$ 600.00	\$ 1,200.00
19	Dr Structure Cover, Type K	Ea	1	2	3	\$ 500.00	\$ 1,500.00	\$ 625.00	\$ 1,875.00	\$ 750.00	\$ 2,250.00	\$ 600.00	\$ 1,800.00
20	Underdrain, Subgrade, Open-Graded, 6 inch	Ft	50	50	100	\$ 15.00	\$ 1,500.00	\$ 34.00	\$ 3,400.00	\$ 14.00	\$ 1,400.00	\$ 24.00	\$ 2,400.00
21	HMA, 5E3	Ton		156	156	\$ 100.00	\$ 15,559.50	\$ 107.00	\$ 16,692.00	\$ 130.00	\$ 20,280.00	\$ 140.00	\$ 21,840.00
22	HMA, 3E3	Ton		233	233	\$ 95.00	\$ 22,172.29	\$ 105.00	\$ 24,465.00	\$ 115.00	\$ 26,795.00	\$ 130.00	\$ 30,290.00
23	Curb and Gutter, Conc, Det F4, Modified	Ft		520	520	\$ 30.00	\$ 15,600.00	\$ 25.00	\$ 13,000.00	\$ 23.00	\$ 11,960.00	\$ 25.00	\$ 13,000.00
24	Sidewalk, Conc, 4 inch	Sft		1150	1150	\$ 9.00	\$ 10,350.00	\$ 5.50	\$ 6,325.00	\$ 5.50	\$ 6,325.00	\$ 7.00	\$ 8,050.00
25	Sidewalk Ramp, Conc, 6 inch	Sft		550	550	\$ 10.00	\$ 5,500.00	\$ 6.50	\$ 3,575.00	\$ 6.50	\$ 3,575.00	\$ 8.50	\$ 4,675.00
26	Detectable Warning Surface	Ft		32	32	\$ 60.00	\$ 1,920.00	\$ 35.00	\$ 1,120.00	\$ 35.00	\$ 1,120.00	\$ 50.00	\$ 1,600.00
27	Landscape Allowance	Dlr	30000		30000	\$ 1.00	\$ 30,000.00	\$ 1.00	\$ 30,000.00	\$ 1.00	\$ 30,000.00	\$ 1.00	\$ 30,000.00
28	Post, Steel, 3 lb	Ft	14		14	\$ 6.00	\$ 84.00	\$ 50.00	\$ 700.00	\$ 20.00	\$ 280.00	\$ 20.00	\$ 280.00
29	Sign, Type IIIA	Sft	2		2	\$ 15.00	\$ 30.00	\$ 50.00	\$ 100.00	\$ 10.00	\$ 20.00	\$ 100.00	\$ 200.00
30	Pavt Mrkg, Ovly Cold Plastic, Accessible Symbol	Ea	1		1	\$ 220.00	\$ 220.00	\$ 400.00	\$ 400.00	\$ 25.00	\$ 25.00	\$ 1,000.00	\$ 1,000.00
31	Pavt Mrkg, Waterborne, for Rest Areas, Parks, & Lots, 4 inch, Blue	Ft	65		65	\$ 0.30	\$ 19.50	\$ 2.25	\$ 146.25	\$ 0.40	\$ 26.00	\$ 1.00	\$ 65.00
32	Pavt Mrkg, Waterborne, for Rest Areas, Parks, & Lots, 4 inch, White	Ft	495		495	\$ 0.30	\$ 148.50	\$ 1.95	\$ 965.25	\$ 0.40	\$ 198.00	\$ 0.60	\$ 297.00
33	Maintaining Traffic	LSUM	1		1	\$ 1,000.00	\$ 1,000.00	\$ 3,500.00	\$ 3,500.00	\$ 500.00	\$ 500.00	\$ 1,000.00	\$ 1,000.00
34	Surface Restoration	LSUM	1		1	\$ 5,000.00	\$ 5,000.00	\$ 3,050.00	\$ 3,050.00	\$ 2,500.00	\$ 2,500.00	\$ 6,000.00	\$ 6,000.00
35	Crew Days	Day	30			\$ 640.00	\$ 19,200.00	\$ 640.00	\$ 16,000.00	\$ 640.00	\$ 6,400.00	\$ 640.00	\$ 12,800.00
	Contingency for Estimate					\$ 22,921.67	\$ 22,921.67						
	<b>Total Cost</b>					<b>\$ 252,138.33</b>	<b>\$ 252,138.33</b>	<b>Total Cost</b>	<b>\$ 216,414.00</b>	<b>Total Cost*</b>	<b>\$ 228,219.00</b>	<b>Total Cost</b>	<b>\$ 253,647.00</b>

\$ X,XXX.XX Indicates Corrected Entry and Total Cost\* Indicates Corrected Total

Award Amount (Excludes Crew Days)

\$ 200,414.00

**INDEX OF SHEETS**

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# CITY OF NOVI

## PAVILION SHORE PARK PARKING LOT ADDITION

### CITY OF NOVI OAKLAND COUNTY, MI

**GENERAL NOTES**

- 1) MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE CITY OF NOVI STANDARDS AND SPECIFICATIONS AND THE PROJECT MANUAL.
- 2) THE PROPOSED IMPROVEMENTS COVERED BY THESE PLANS ARE IN ACCORDANCE WITH THE AASHTO; A POLICY ON GEOMETRIC DESIGN OF HIGHWAYS AND STREETS, 2004.
- 3) THE IMPROVEMENTS COVERED BY THESE PLANS SHALL BE DONE IN ACCORDANCE WITH THE 2011 MICHIGAN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.

FILE:2017_PAVILIONSHORE_TITILE.DGN
AUTH    DATE    REVISION



FINAL REVIEW  
7/19/2017



**UTILITIES**

<p><b>AT&amp;T</b> ATTN: ANDREW JOHNSON 550 S. MAPLE RD., ROOM FLR 2 ANN ARBOR, MI 48103 734-996-5350 aj1728@att.com</p> <p><b>BRIGHTHOUSE NETWORKS</b> ATTN: BOB HENDZELL 31889 INDUSTRIAL ROAD LIVONIA, MI 48150-1821 734-293-1258 bob.hendzell@mybriighthouse.com</p> <p><b>CONSUMER'S ENERGY</b> ATTN: CHRIS SCHNEIDER 11801 FARMINGTON ROAD LIVONIA, MI 48150 734-413-6277 christopher.schneider@cmsenergy.com</p> <p><b>DTE ENERGY</b> ATTN: MIKE BUTLER 81001 HAGGERTY BELLEVILLE, MI 48111 734-397-4011 buttermd@dteenergy.com</p> <p><b>ITC TRANSMISSION</b> ATTN: ERIN KEELER 27175 ENERGY WAY NOVI, MI 48377 ekeeler@itctransco.com</p> <p><b>CITY OF NOVI</b> ATTN: MATT WIKTOROWSKI 26300 LEE BEGOLE DR NOVI, MI 48375 248-735-5640 mwiktorowski@cityofnovi.org</p> <p><b>CITY OF NOVI</b> ATTN: SCOTT ROSELLE 26300 LEE BEGOLE DR NOVI, MI 48375 248-735-5644 eroselle@cityofnovi.org</p>	<p>TELEPHONE</p> <p>CABLE</p> <p>NATURAL GAS</p> <p>ELECTRIC</p> <p>ELECTRIC</p> <p>ROADS &amp; DRAINS</p> <p>WATER &amp; SEWER</p>
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MAYOR  
BOB GATT

MAYOR PRO-TEM  
DAVID STAUDT

CITY COUNCIL  
ANDREW MUTCH  
WAYNE WROBEL  
LAURA MARIE CASEY  
GWEN MARKHAM  
BRIAN BURKE

ENGINEERING SENIOR MANAGER  
GEORGE D. MELISTAS

CONTRACT FOR:  
PARKING LOT CONSTRUCTION

PREPARED UNDER THE SUPERVISION OF:

Approved \_\_\_\_\_ Date \_\_\_\_\_  
PROFESSIONAL ENGINEER

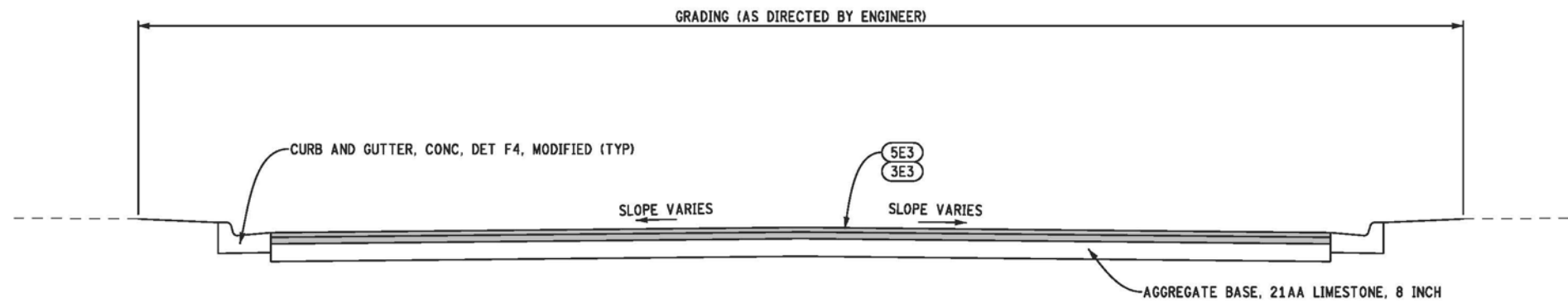


PAVILION SHORE PARKING LOT ADDITION

TITLE SHEET

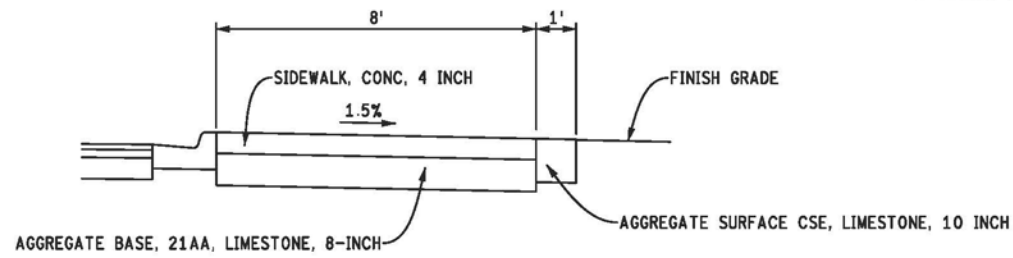
**CALL MISS DIG**  
3 WORKING DAYS BEFORE YOU DIG  
(EXCLUDING SATURDAYS, SUNDAYS AND HOLIDAYS)  
(800) 482-7171 OR 811

JOB 47637
DATE 7/19/2017
SHEET 1

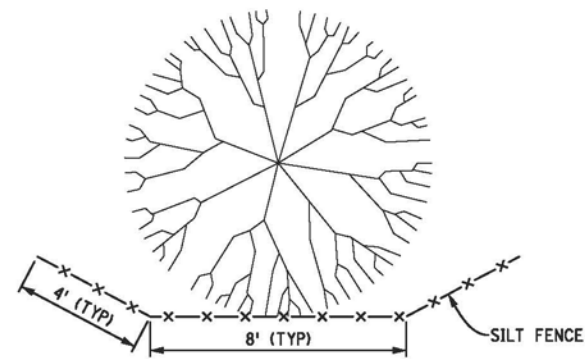


TYPICAL PARKING LOT SECTION

TO APPLY:  
PAVILION SHORE PARKING LOT  
& PARKING LOT PATCH

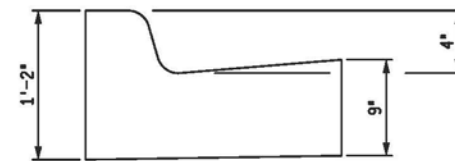


TYPICAL SIDEWALK SECTION

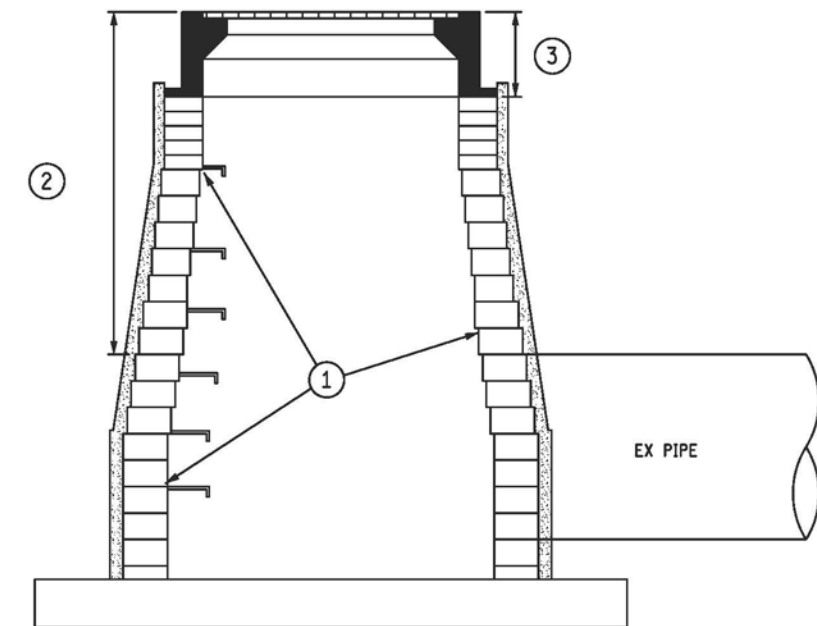


TREE PROTECTION BARRIER DETAIL

NOT TO SCALE



CURB AND GUTTER, CONC, DET F4, MODIFIED



STRUCTURE ADJUSTMENT AND  
RECONSTRUCTION DETAIL

NOT TO SCALE

1. WHEN DIRECTED BY THE ENGINEER, REMOVE LOOSE MORTAR FROM EXISTING JOINTS AND REPLACE WITH NEW MORTAR. PAID PER EACH AS POINT-UP DRAINAGE STRUCTURE.
2. WHEN DIRECTED BY THE ENGINEER, REMOVE AND REPLACE TOP PORTION OF DRAINAGE STRUCTURE TO THE LIMITS DIRECTED BY THE ENGINEER. EXISTING MASONRY OR BLOCK MAY BE REUSED IF IN GOOD CONDITION. PAID BY THE FOOT OF STRUCTURE DEPTH AS RECONSTRUCT DRAINAGE STRUCTURE.
3. REMOVE FRAME AND GRATE. REMOVE AND REPLACE ADJUSTING RINGS AND MORTAR BED AS REQUIRED TO ACHIEVE PROPOSED GRADE AND REPLACE FRAME AND GRATE. REMOVE AND REPLACE ADJACENT CURB AND GUTTER AS NEEDED FOR STRUCTURE WORK. PAID PER EACH AS ADJUST DRAINAGE STRUCTURE.

HMA APPLICATION ESTIMATE

IDENT NO.	ITEM	RATE PER SYD	PERFORMANCE GRADE	REMARKS
5E3	HMA, 5E3	220 lb	64-28	TOP COURSE (AWI=260)
3E3	HMA, 3E3	330 lb	64-28	LEVELING / BASE COURSE
*BOND COAT		0-0.10 GAL		

\*FOR INFORMATION ONLY



FILE:2017\_PAVILIONSHORE\_TYP\_01.DGN  
AUTH DATE REVISION

AECOM



PAVILION SHORE PARKING LOT ADDITION

TYPICAL SECTIONS AND DETAILS

JOB 47637  
DATE 7/19/2017  
SHEET 2

**GENERAL NOTES**

**STANDARDS AND SPECIFICATIONS**

All work must be completed in accordance with the City of Novi Standards and Specifications.

**MAINTAINING TRAFFIC**

Traffic must be maintained at all times during construction. Part-width construction is required.

**UNDERGROUND UTILITIES / MISS DIG**

For protection of underground utilities and in conformance with Public Act 53, 1974, the Contractor shall dial 1-800-482-7171 a minimum of three full working days, excluding Saturdays, Sundays, and holidays prior to beginning each excavation in areas where public utilities have not been previously located. Members will thus be routinely notified. This does not relieve the Contractor of the responsibility of notifying utility owners who may not be a part of the "Miss Dig" alert system.

If plan information indicates an existing underground utility is or will be out of service within the limits of this contract. The Contractor is cautioned to treat such a line as if it were still in service and notify "Miss Dig" when working in the area of the out of service facility.

All utility information is approximate and is based on information provided by the owners.

**EXISTING WATER MAINS AND SEWERS**

The Contractor shall be responsible for any damage to properly identified existing water mains and/or existing sewers during the construction of this project.

**TRASH COLLECTION**

When access by refuse collection vehicles is not provided, Contractor shall collect, deliver and return refuse containers from individual driveways and deliver to a central location for pickup by refuse haulers. Refuse in the City of Novi is collected by various private firms on scheduled days.

**MAIL COLLECTION AND DELIVERY**

Mail collection and delivery must be maintained during construction. If access for mail delivery is interrupted, Contractor shall furnish and assemble temporary collection and delivery boxes for each affected property at a central location, which will be determined by the Novi Postmaster. Mailboxes to be a type approved for use the U.S. Postmaster.

**CONTRACTOR PARKING**

Contractor parking areas will be limited to public ROW areas only. Do not occupy open roadways with parked vehicles.

**TREE PROTECTION NOTES**

**ROOT PROTECTION**

- Any damage to tree roots is to be reported to the on-site construction observer or owner.
- Do not drive or park any vehicle or equipment, store any materials, or wash any equipment or materials within the drip line of any tree. These or other actions within the drip line may be considered damage by the Engineer.
- Conduct operations to minimize excavations adjacent to trees. Where required work exposes tree roots, place wet mulch or other approved materials as soon as possible. Consult with Engineer or City Forester prior to beginning work.

**TREE PROTECTION BARRIER**

- All trees within the work zone shall have tree protection barrier installed prior to construction unless otherwise directed by the Engineer. Tree protection barrier ordered by the Engineer will be measured and paid for as silt fence.
- Barrier to be silt fence material and placed for use as visual and physical tree protection barrier. It is not required that toe be buried or sections be overlapped as for soil erosion control.
- Any damage to any tree is to be reported to the on-site construction observer or owner.
- Contractor is responsible for any tree damage. Trees determined to be damaged in the opinion of the Engineer shall be replaced at the Contractor's expense.

**SOIL EROSION AND SEDIMENTATION CONTROL**

**SEQUENCE OF CONSTRUCTION**

- Prior to removing pavement, sidewalk, or driveways, or commencing grading operation; place temporary SESC measures (inlet filters and silt fence). Engineer's approval of SESC measures must be obtained prior to excavation. Approval by the Engineer is also required for material stockpile and staging area locations. Material stockpiles shall be ringed with silt fence.
- Installation of silt fencing or tree protection fencing shall not occur prior to the initial city pre-construction meeting. When natural features exist on the site, inspection of staking may be required prior to the installation of the fencing.
- During construction, maintain all temporary SESC measures. When inlet covers are removed, inlet filters shall be lowered and remain on the structures at all times. Address any deficiencies in SESC measures immediately.
- Within five days of the completion of paving, permanent seeding shall be placed.
- Remove temporary SESC measures within one week of placing permanent seeding.

**SESC NOTES**

- Contractor is responsible for installation and maintenance of all soil erosion and sedimentation control measures and for full compliance with the soil erosion and sedimentation control permit to be issued for the project.
- Temporary soil erosion and sedimentation control measures shall include inlet filters and silt fence in this project. Inlet filters shall be ACF Environmental Silt Sack or approved equal. Silt Fencing shall be Synthetic Industries "Terra Tex", Exxon "GTF-180", or approved equal.
- All SESC measures shall be constructed in accordance with the Oakland County details included in the plans.
- Inlet filters shall be installed on all drainage inlet structures within the reconstruction limits and on structures downstream of the reconstruction area which, in the opinion of the Engineer, may receive runoff from the work area.
- Silt fencing shall be installed at locations determined by the Engineer.
- Temporary pumps, if required, shall be discharged into a filter bag or similar device. Contractor shall obtain advance approval from the Engineer for all dewatering operations and filter devices to be used.
- Street sweeping and dust control shall be the responsibility of the Contractor, and shall be completed daily or as directed by the Engineer.
- All drainage ditches shall be stabilized with erosion control blanket and shall utilize check dams as necessary. Drainage ditches steeper than 3% shall be sodded.
- Permanent seeding, including topsoil, fertilizer, and mulch blankets shall be placed on all unpaved disturbed areas in accordance with the MDOT Standard Specifications. Seeding work shall be completed on each roadway within five days of the completion of paving work on that roadway.
- Stockpile locations shall be ringed with silt fence. All stockpile locations shall be approved by the Engineer.

**SOIL SURVEY**

The soils in the proposed Parking Lot Addition area include

- Fox sandy loam, till plain, 2-6% slopes

**IRRIGATION AND LANDSCAPE LIGHTING SYSTEMS**

Contractor shall protect irrigation and landscape lighting systems from damage. If damaged, the Contractor shall restore all irrigation and landscape lighting systems at the Contractor's expense.

**NOTES APPLYING TO STANDARD PLANS**

Where the following items are called for on plans, they are to be constructed according to the standard plan given below opposite each item unless otherwise indicated.

Title	Plan No.
<b>ROAD</b>	
DRAINAGE STRUCTURES	R-1-G*
COVER B	R-7-F
COVER K	R-15-F
DRIVEWAY OPENINGS & APPROACHES AND CONCRETE SIDEWALK	R-29-I
CONCRETE CURB AND CONCRETE CURB & GUTTER	R-30-G
GRANULAR BLANKET, UNDERDRAINS, OUTLET ENDINGS FOR UNDERDRAINS, AND SEWER BULKHEADS	R-80-E
BEDDING AND FILLING AROUND PIPE CULVERTS	R-82-D
UTILITY TRENCHES	R-83-C*
<b>PAVEMENT MARKINGS</b>	
LONGITUDINAL LINE TYPES AND PLACEMENT	PAVE-905-C
<b>SIGNING</b>	
STEEL POSTS	SIGN-200-D
<b>WORK ZONE DEVICES</b>	
GROUND DRIVEN SIGN SUPPORTS FOR TEMP SIGNS	WZD-100-A*
TEMPORARY TRAFFIC CONTROL DEVICES	WZD-125-E*

\* Denotes Special Detail

FILE: NOV12.CEL  
AUTH DATE REVISION



PAVILION SHORE PARKING LOT ADDITION

GENERAL NOTES

**QUANTITY SHEET**

Item No.	Item Description	Unit	As Directed	Plan Sheet	Total
1	Mobilization (10%)	LSUM	1		1
2	Pre-Construction Audio-Visual	LSUM	1		1
3	Stump, Rem, 6 inch to 18 inch	Ea	21	9	30
4	HMA Surface, Rem	Syd	10	10	20
5	Curb and Gutter, Rem	Ft		60	60
6	Masonry and Conc Structure, Rem	Cyd	50		50
7	Subgrade Undercutting, Type II	Cyd	225		225
8	Grading	Syd		1,750	1,750
9	Erosion Control, Silt Fence	Ft	300		300
10	Erosion Control, Inlet Protection, Fabric Drop	Ea	5		5
11	Aggregate Base, 21AA, Limestone, 8-inch	Syd		1600	1,600
12	Aggregate Surface Cse, Limestone, 10-inch	Syd		20	20
13	Dr Structure Cover, Adj, Case 1	Ea		1	1
14	Sewer, CI E, 12 inch	Ft		165	165
15	Sewer Tap, 12 inch	Ea		1	1
16	Dr Structure, 24 inch dia	Ea	1	1	2
17	Dr Structure, 48 inch dia	Ea	1	2	3
18	Dr Structure Cover, Type B	Ea	1	1	2
19	Dr Structure Cover, Type K	Ea	1	2	3
20	Underdrain, Subgrade, Open-Graded, 6 inch	Ft	50	50	100
21	HMA, 5E3	Ton		156	156
22	HMA, 3E3	Ton		233	233
23	Curb and Gutter, Conc, Det F4, Modified	Ft		520	520
24	Sidewalk, Conc, 4 inch	Sft		1,150	1,150
25	Sidewalk Ramp, Conc, 6 inch	Sft		550	550
26	Detectable Warning Surface	Ft		32	32
27	Landscape Allowance	Dir	30000		30,000
28	Post, Steel, 3 lb	Ft	14		14
29	Sign, Type IIIA	Sft	2		2
30	Pavt Mrkg, Ovly Cold Plastic, Accessible Symbol	Ea	1		1
31	Pavt Mrkg, Waterborne, for Rest Areas, Parks, & Lots, 4 inch, Blue	Ft	65		65
32	Pavt Mrkg, Waterborne, for Rest Areas, Parks, & Lots, 4 inch, White	Ft	495		495
33	Maintaining Traffic	LSUM	1		1
34	Surface Restoration	LSUM	1		1
35	Crew Days	Day			-

FILE: NOVI2.CEL  
AUTH DATE REVISION



PAVILION SHORE PARKING LOT ADDITION

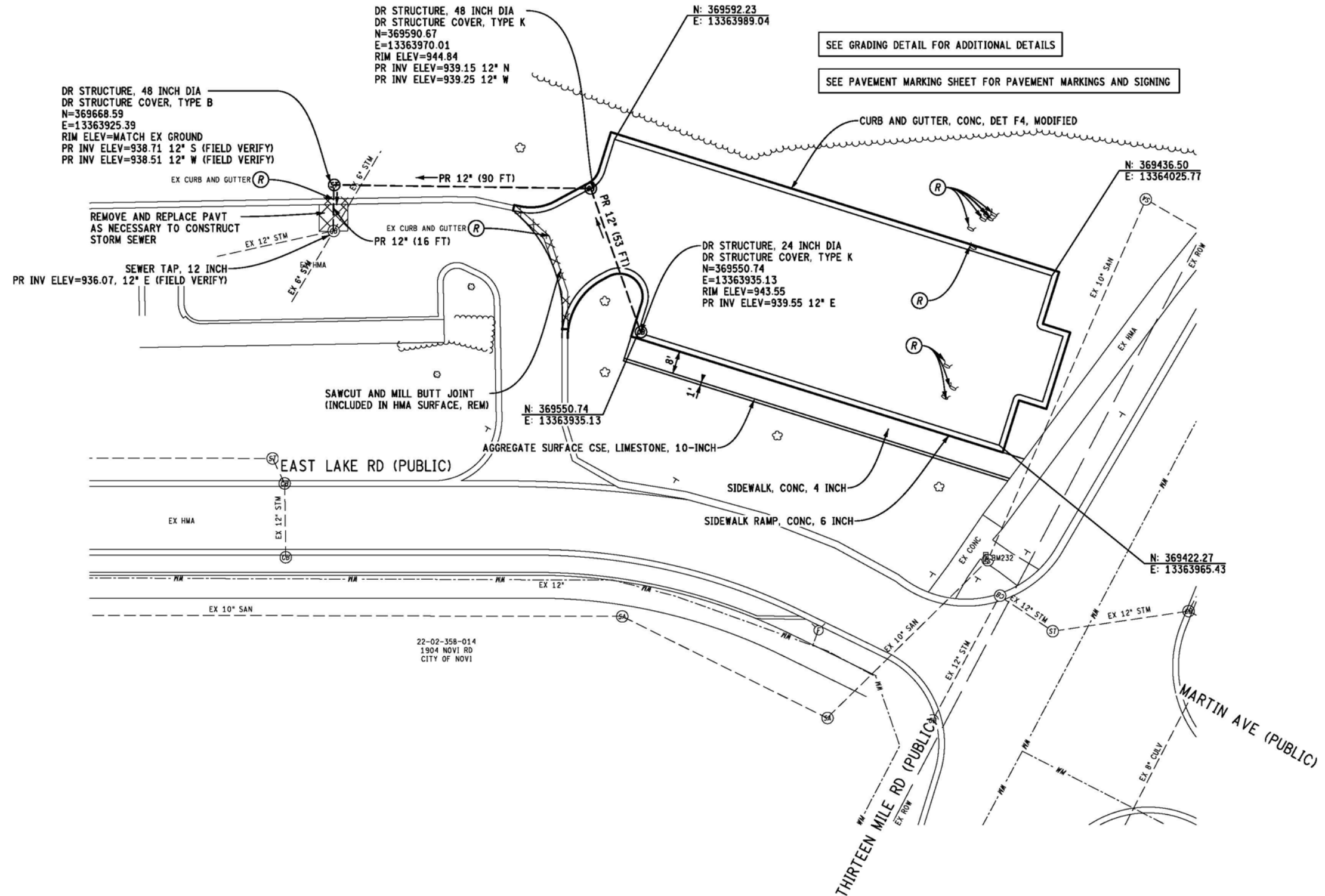
QUANTITY SHEET

JOB  
47637  
DATE  
7/19/2017  
SHEET  
4



NOVI BENCHMARK #232  
 NORTHING: 369406.44  
 EASTING: 13363929.05  
 ELEV: 946.81  
 DESC: X ON NORTH RIM OF SANITARY MANHOLE LOCATED IN THE NORTHEAST QUAD OF INTERSECTION EASTLAKE DR AND 13 MILE ROAD, 40 FEET NORTH OF CENTERLINE OF 13 MILE ROAD AND 10 FEET EAST OF BACK OF CURB

NOVI BENCHMARK #1111  
 NORTHING: 369268.54  
 EASTING: 13363357.95  
 ELEV: 948.75  
 DESC: X ON NORTH BOLT LIGHT POLE BASE LOCATED AT INTERSECTION OF 13 MILE ROAD AND NOVI ROAD, 6 FEET SOUTHEAST OF BACK OF CURB AND ACROSS FROM SOUTH LAKE DRIVE



SEE GRADING DETAIL FOR ADDITIONAL DETAILS

SEE PAVEMENT MARKING SHEET FOR PAVEMENT MARKINGS AND SIGNING

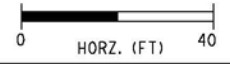
22-02-358-014  
 1904 NOVI RD  
 CITY OF NOVI

FILE: 2017_PAVILIONSHORE_PLANDGN		
AUTH	DATE	REVISION



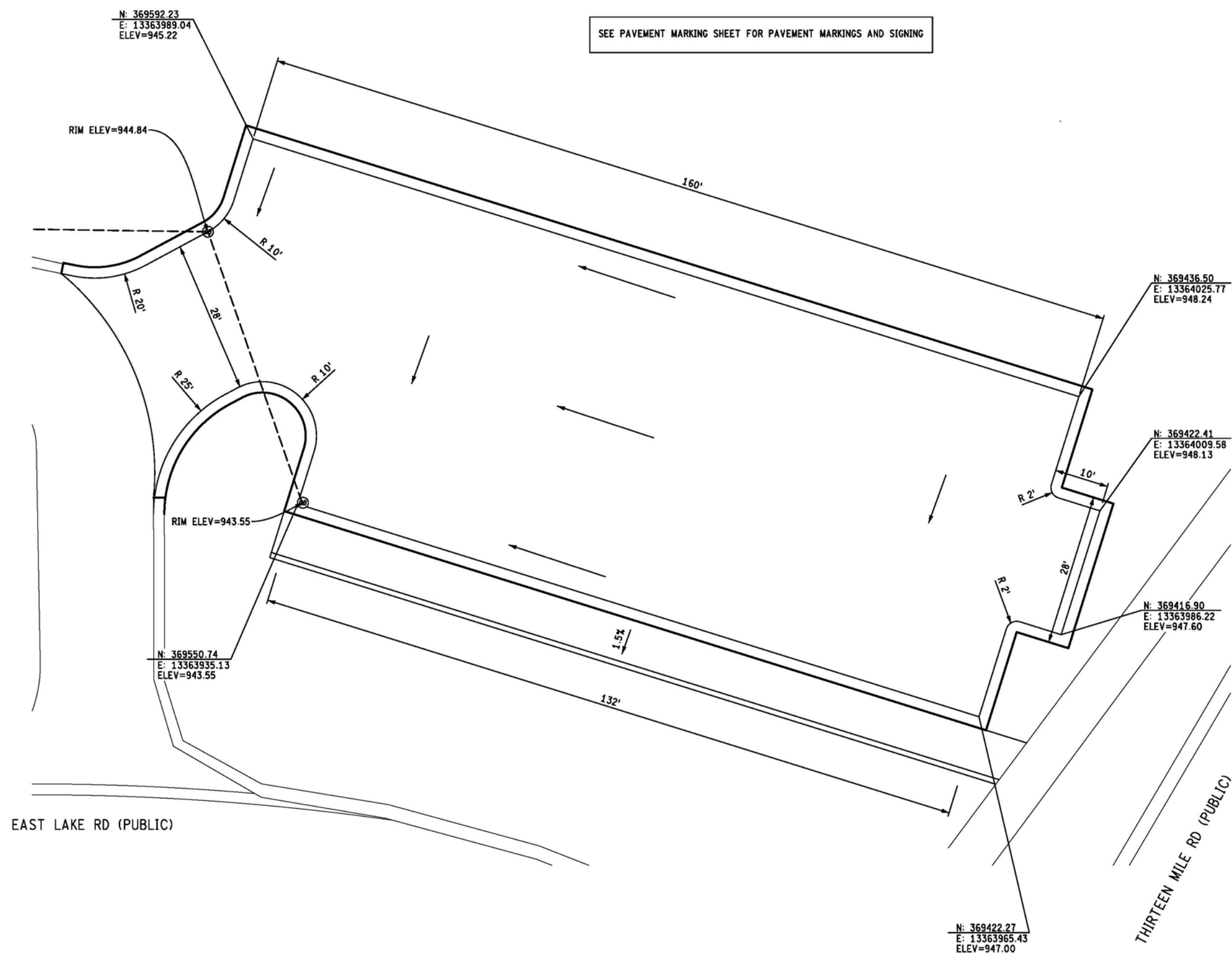
PAVILION SHORE PARKING LOT ADDITION  
 REMOVAL AND CONSTRUCTION SHEET

JOB 47637
DATE 7/19/2017
SHEET 5





SEE PAVEMENT MARKING SHEET FOR PAVEMENT MARKINGS AND SIGNING



N: 369592.23  
E: 13363989.04  
ELEV=945.22

RIM ELEV=944.84

R 20'

R 10'

R 25'

R 10'

RIM ELEV=943.55

N: 369550.74  
E: 13363935.13  
ELEV=943.55

1.5%

132'

160'

N: 369436.50  
E: 13364025.77  
ELEV=948.24

N: 369422.41  
E: 13364009.58  
ELEV=948.13

N: 369416.90  
E: 13363986.22  
ELEV=947.60

N: 369422.27  
E: 13363965.43  
ELEV=947.00

EAST LAKE RD (PUBLIC)

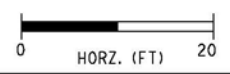
THIRTEEN MILE RD (PUBLIC)

FILE:	AUTH	DATE	REVISION



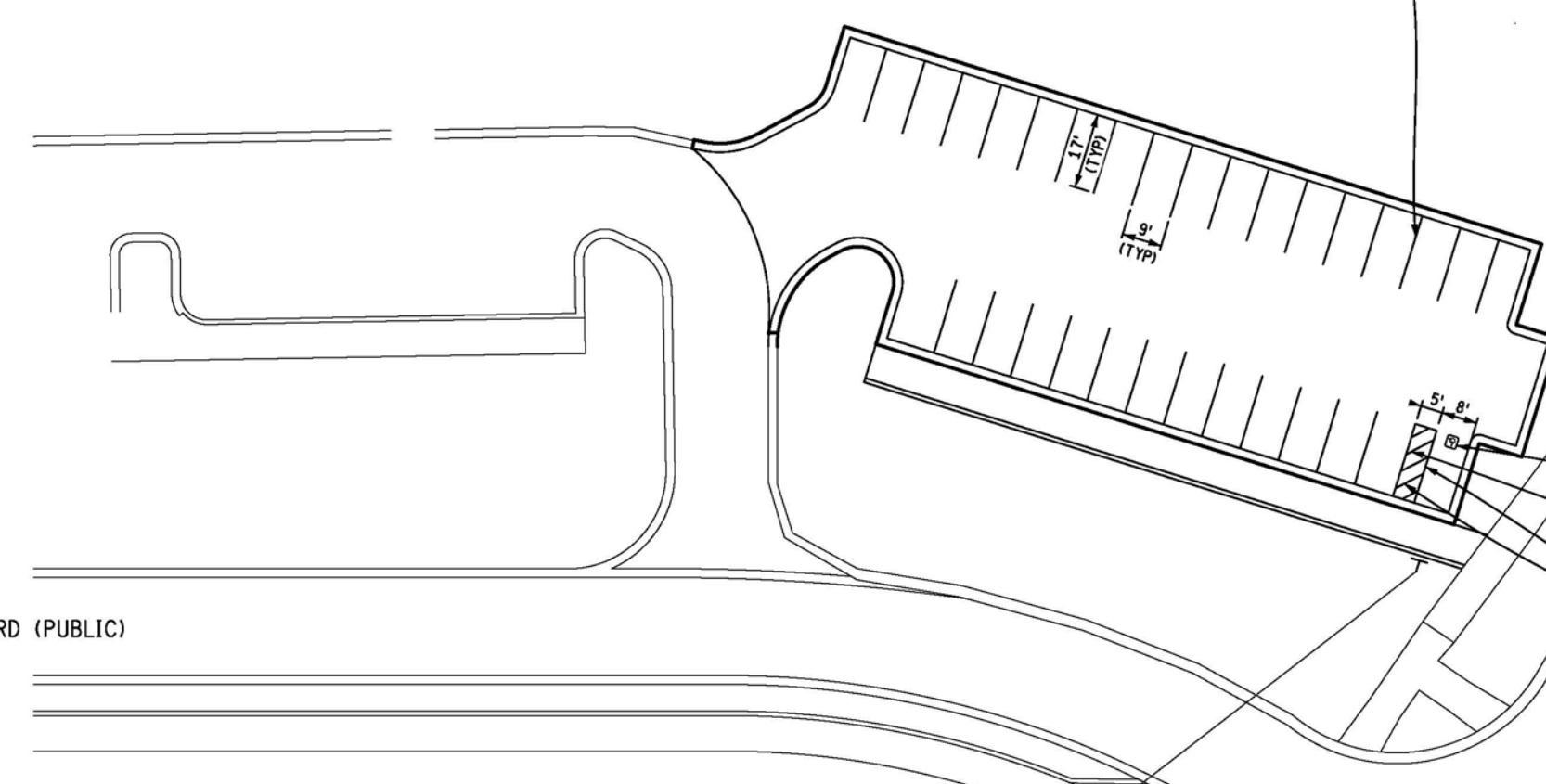
PAVILION SHORE PARKING LOT ADDITION  
GRADING DETAILS

JOB 47637
DATE 7/19/2017
SHEET 6





PAVT MRKG, WATERBORNE, FOR REST AREAS,  
PARKS, & LOTS, 4 INCH, WHITE  
(TYP.)



EAST LAKE RD (PUBLIC)

THIRTEEN MILE RD (PUBLIC)

MARTIN AVE (PUBLIC)

PAVT MRKG, OVLY COLD PLASTIC,  
ACCESSIBLE SYMBOL

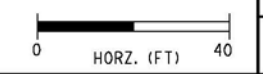
CROSSHATCHING  
(4' SPACING @ 45°)  
(TYP.)

PAVT MRKG, WATERBORNE, FOR REST AREAS,  
PARKS, & LOTS, 4 INCH, BLUE  
(TYP.)



R7-8 (12" X 18")  
1.5 Sft Sign, Type IIIA  
14 Ft Post, Steel, 3 lb

ALL PAVEMENT MARKING AND SIGNS SHALL  
BE COMPLIANT WITH THE MOST RECENT VERSION  
OF THE MICHIGAN MANUAL ON UNIFORM TRAFFIC  
CONTROL DEVICES (MMUTCD).

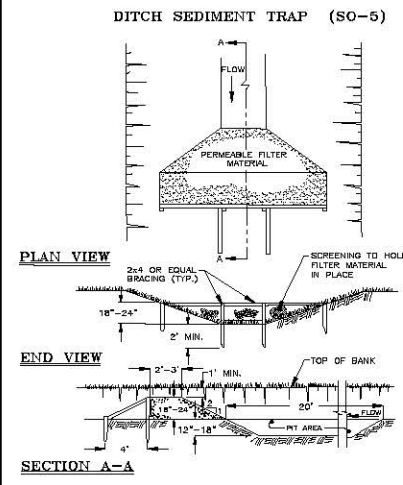
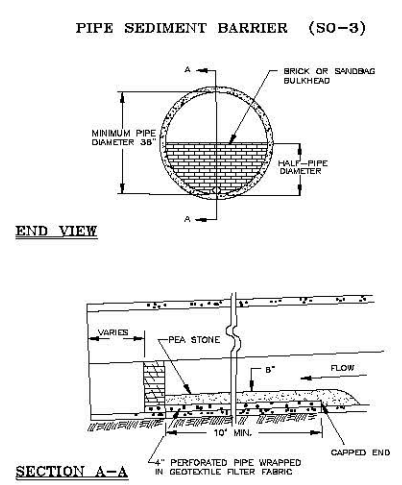
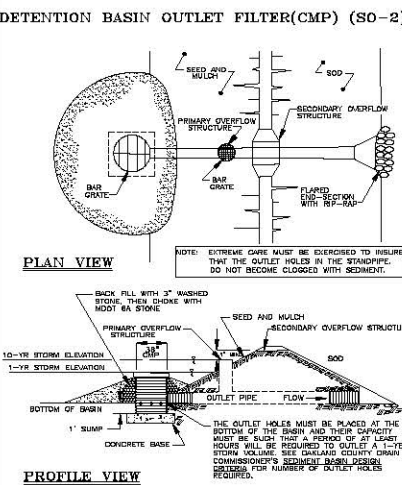
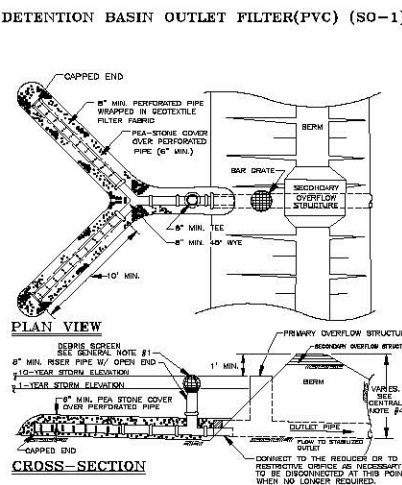
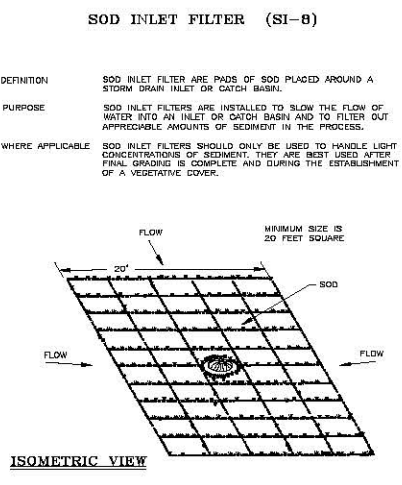
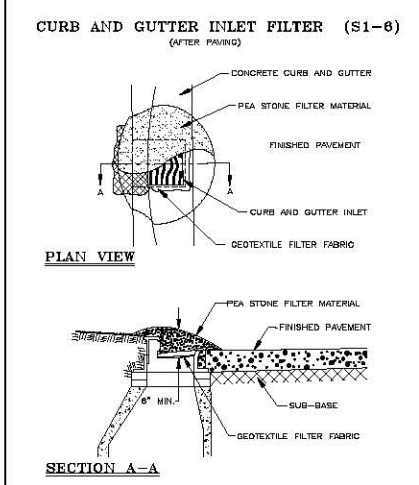
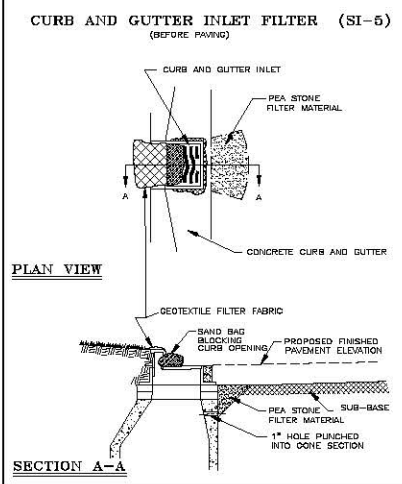
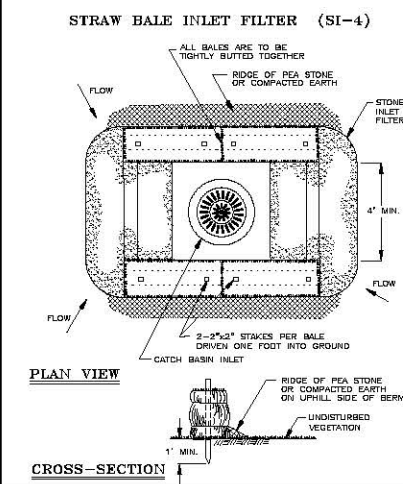
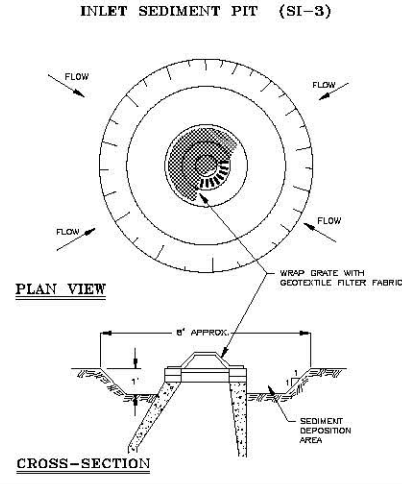
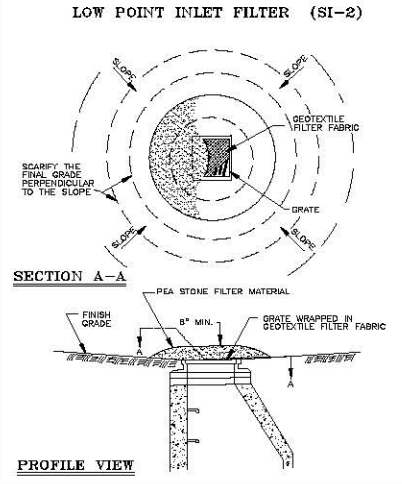
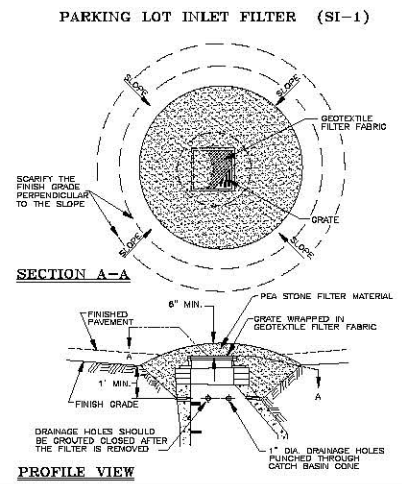
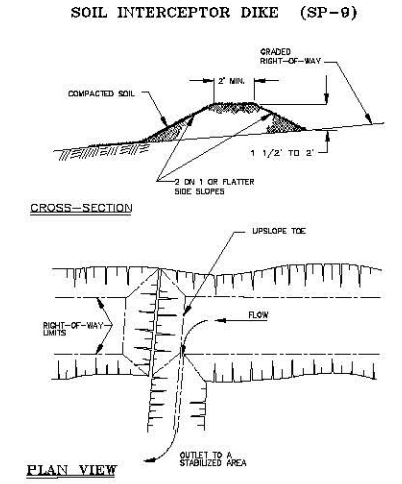
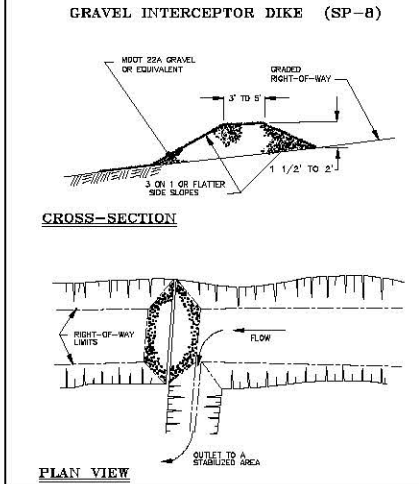
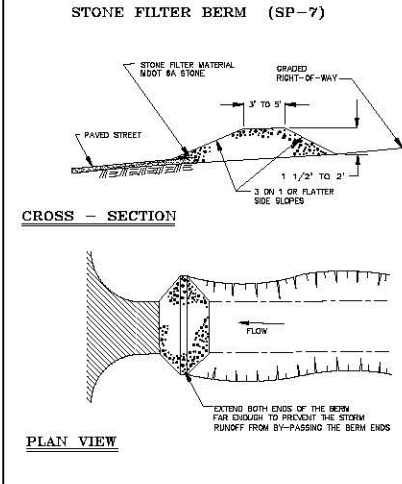
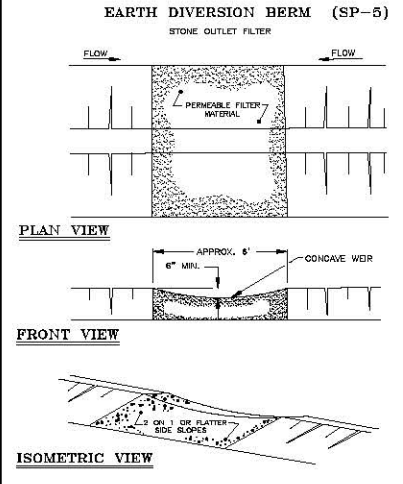
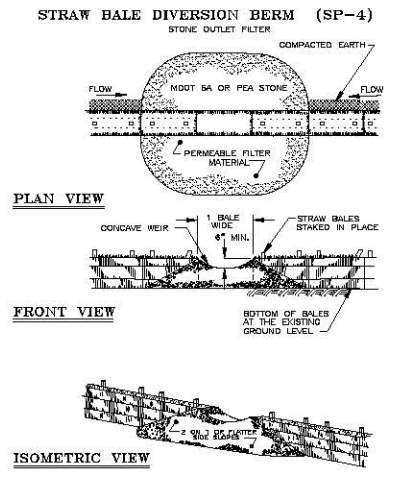
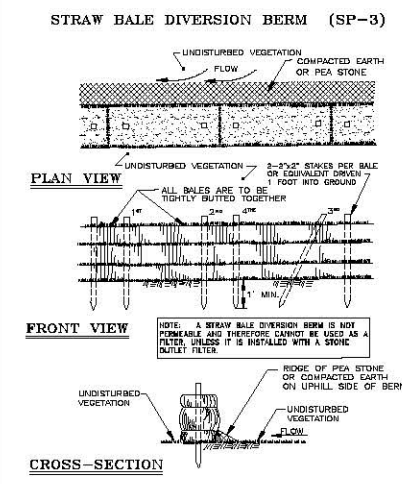
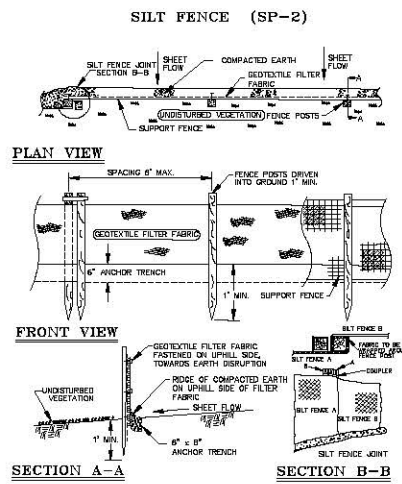
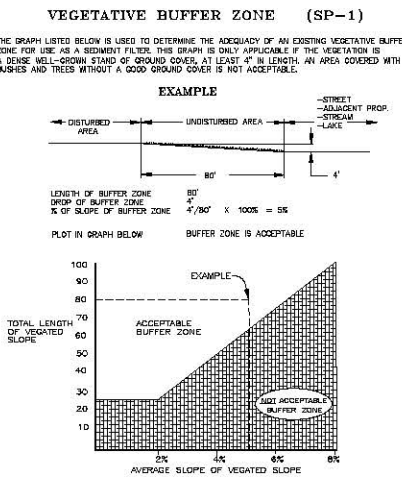
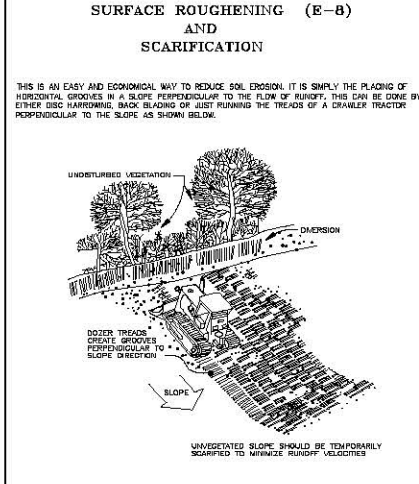
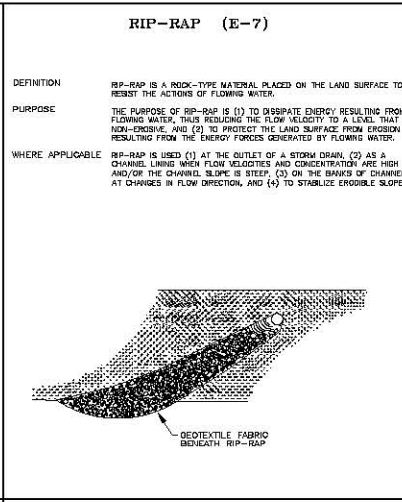
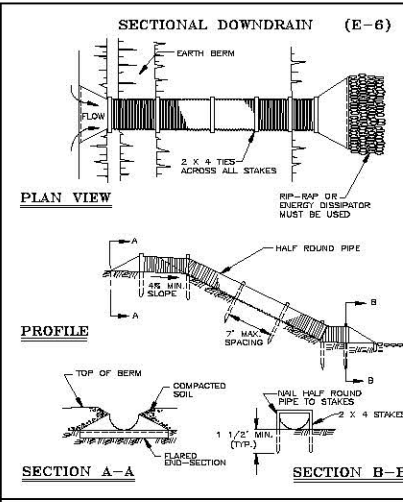
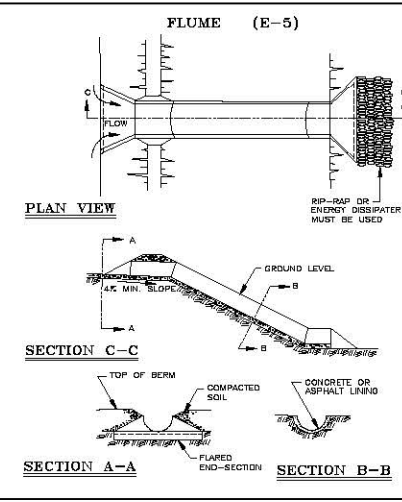
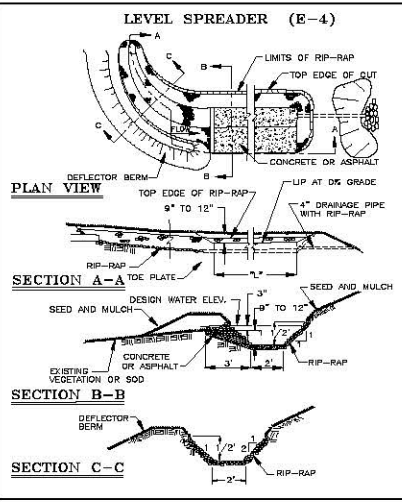
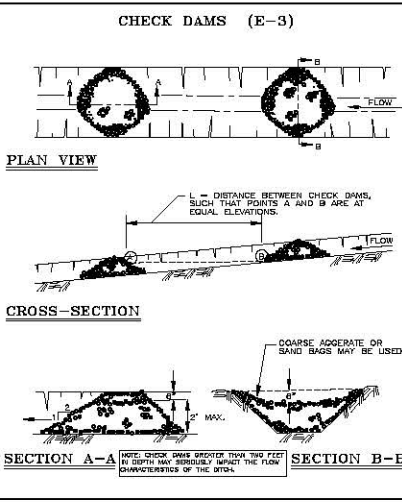
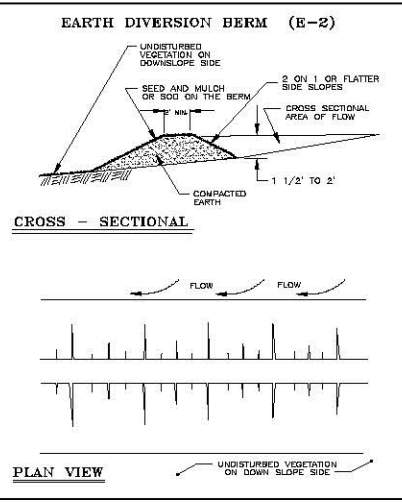
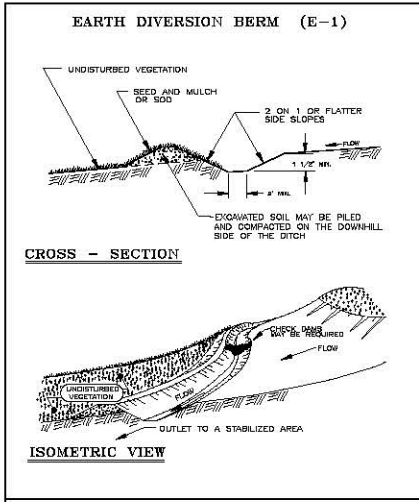


FILE:2017_PAVILIONSHORE_PLAN.DGN		
AUTH	DATE	REVISION



PAVILION SHORE PARKING LOT ADDITION  
PERMANENT PAVEMENT MARKING AND SIGNING

JOB	2017
DATE	7/19/2017
SHEET	7



**NOTE:**

ALL OF THE DETAILS SHOWN ON THIS SHEET, ALONG WITH INFORMATION PERTAINING TO PLAN PREPARATION, DESIGN CRITERIA AND GENERAL NOTES, ETC., ARE INCLUDED IN THE OAKLAND COUNTY DRAIN COMMISSIONER'S **EROSION CONTROL MANUAL**. PLEASE CONTACT THE EROSION CONTROL DIVISION AT (313) 858-5389 TO OBTAIN A COPY OF THE MANUAL.

**SOIL EROSION AND SEDIMENTATION CONTROL DETAILS**

OCDC

DATE: 01/10/11  
SCALE: NONE  
DESIGNED BY: CCDC  
DRAWN BY: CCDC Mapping

ONE PUBLIC WORKS DRAWING, 80 WEST WATSON ROAD, MICHIGAN STATE UNIVERSITY, EAST LANSING, MI 48824

SHEET NO. 8