

Meadow Brook Road Storm Water Emergency Repairs

Culvert vs Bridge

March 17, 2015

Aerial View



Risks

- The Meadow Brook Culvert is failing and emergency supports were installed. The county authorities accepted emergency measures for 1 year. The temporary supports may not endure an additional year from erosion, heavy vehicle traffic and water flow.



Temporary Emergency Repairs



Location Photos

MB Dr. East Bound



MB Dr. West Bound



Location Photo / Safety Fence

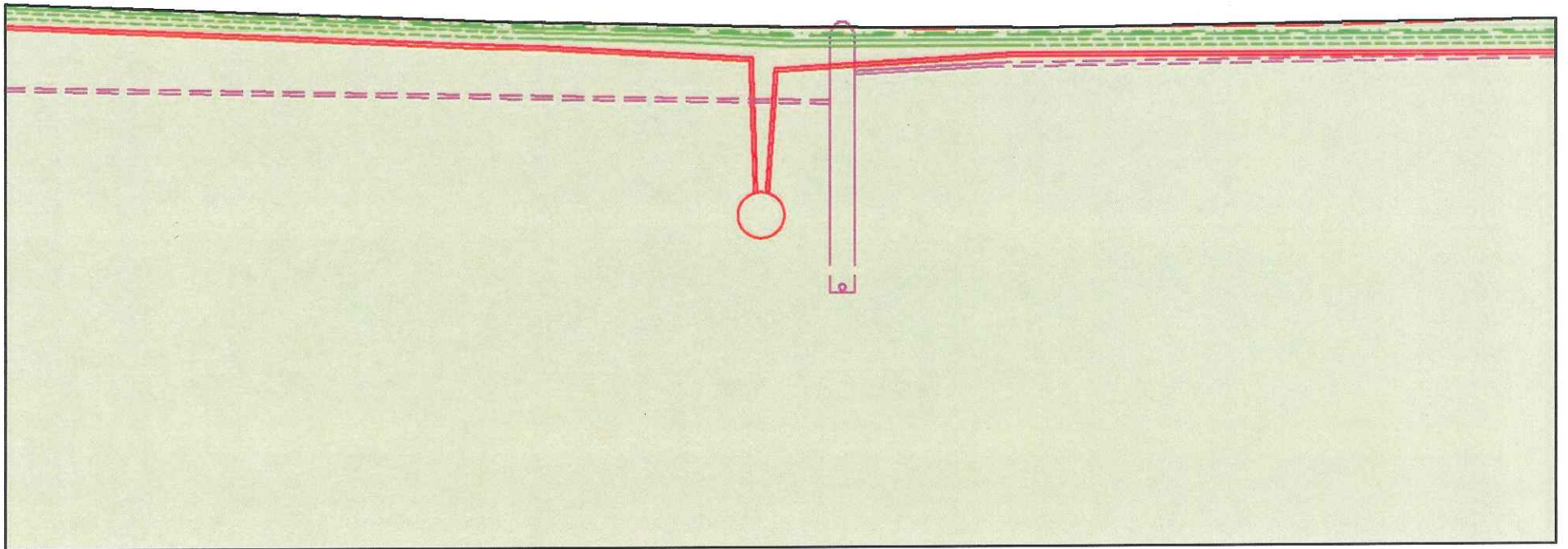
View from Walton



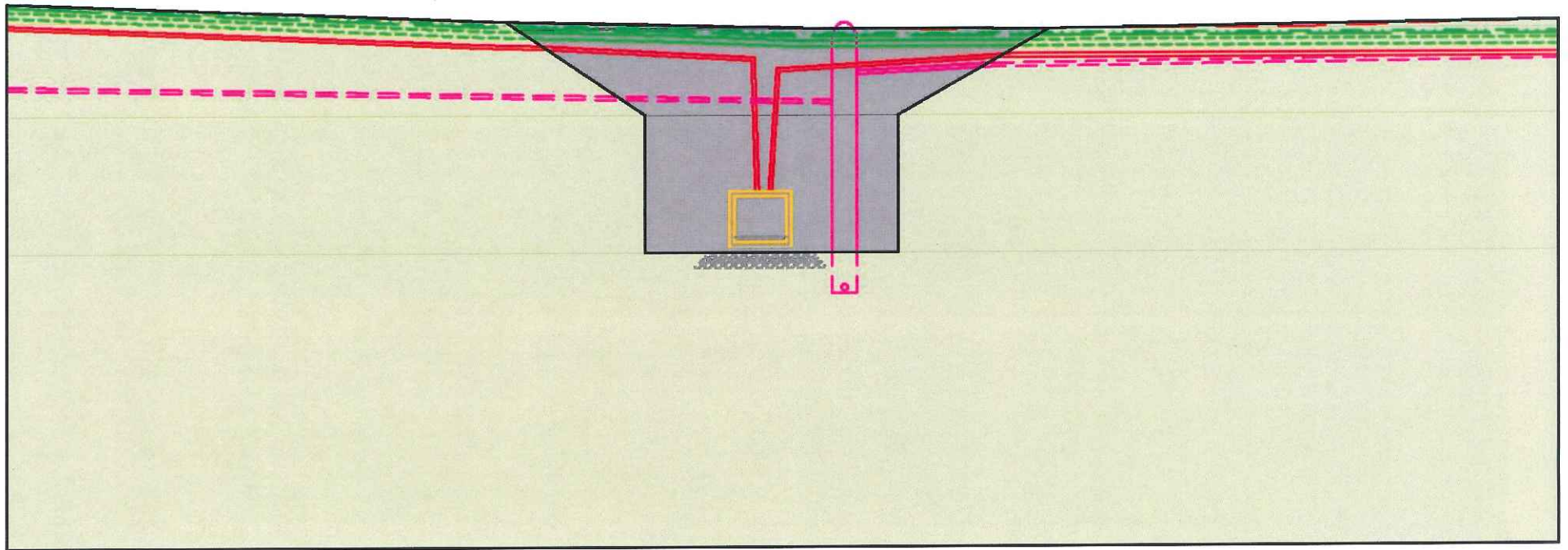
Safety Fence Example



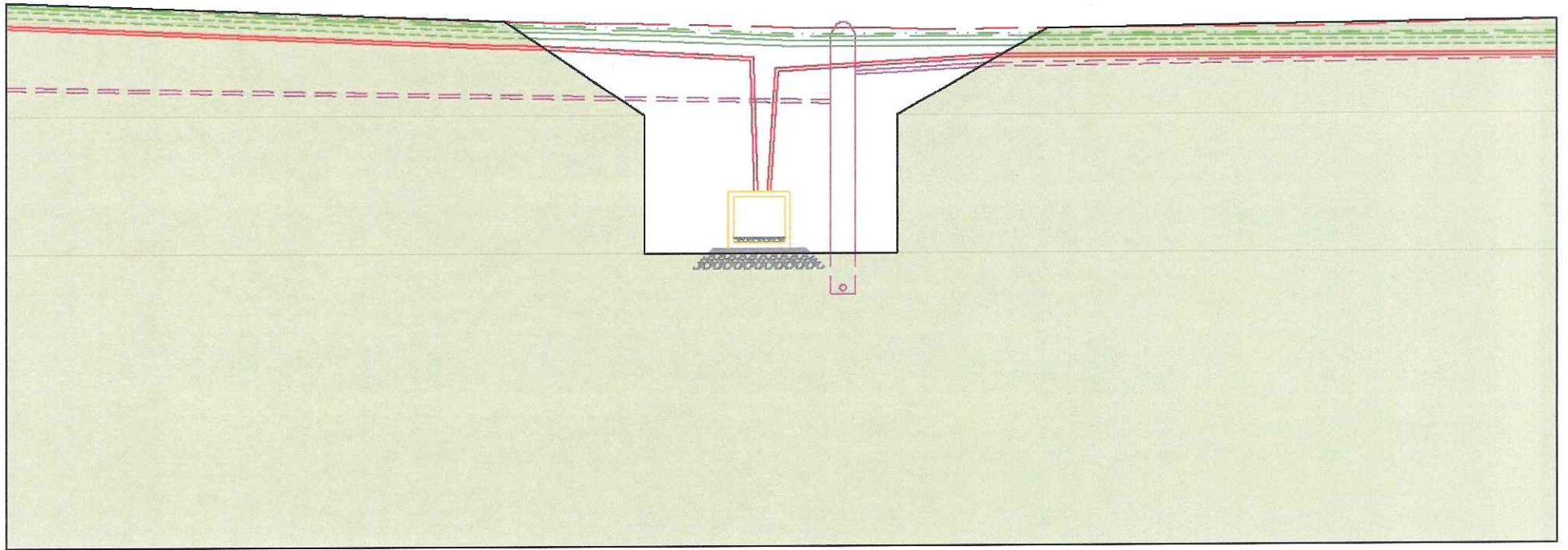
Existing Conditions



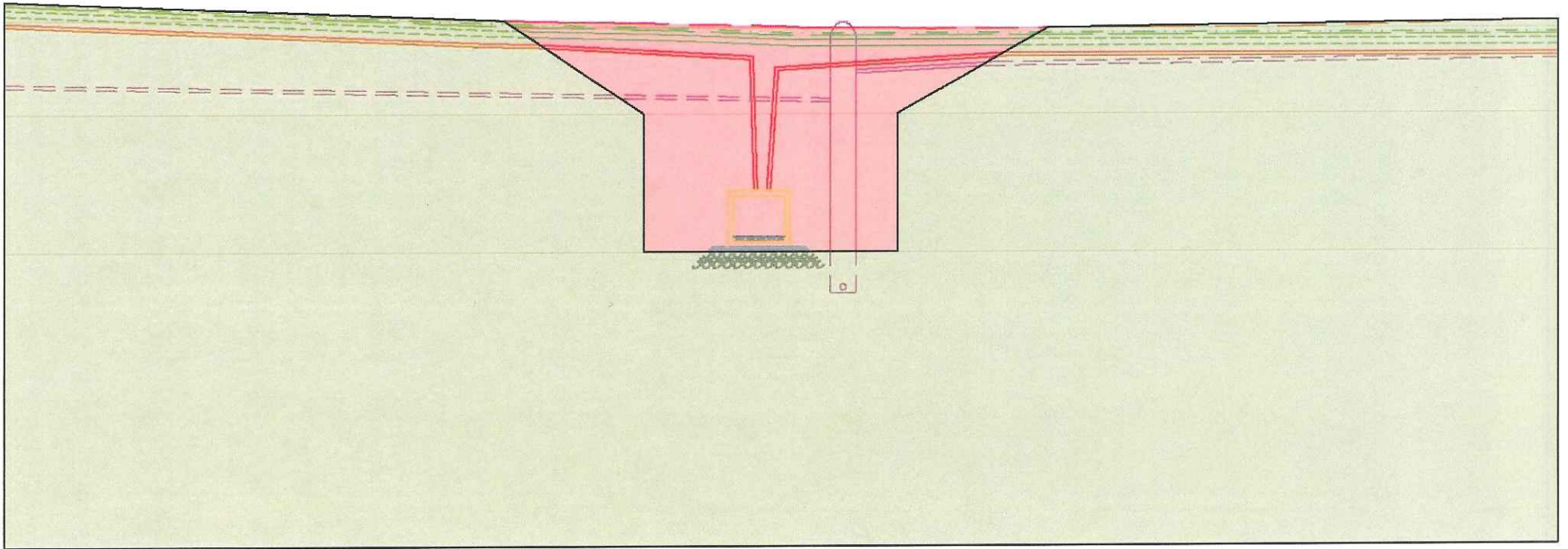
Culvert Excavation Area



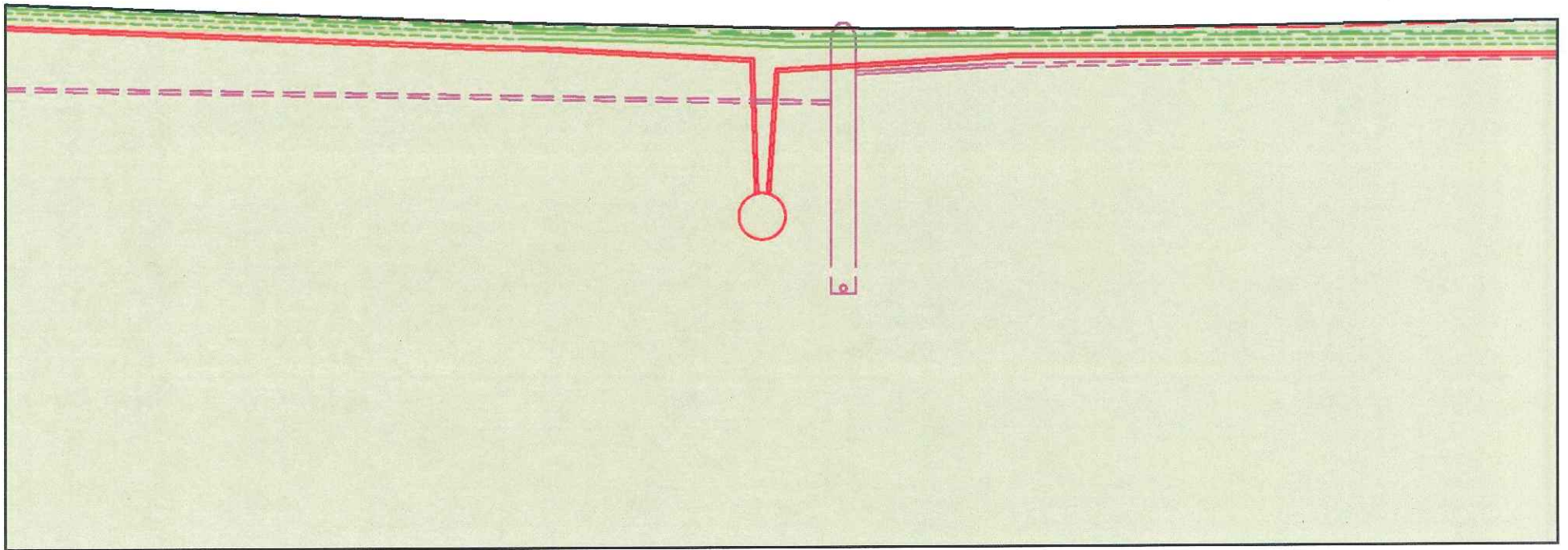
Culvert Work Area



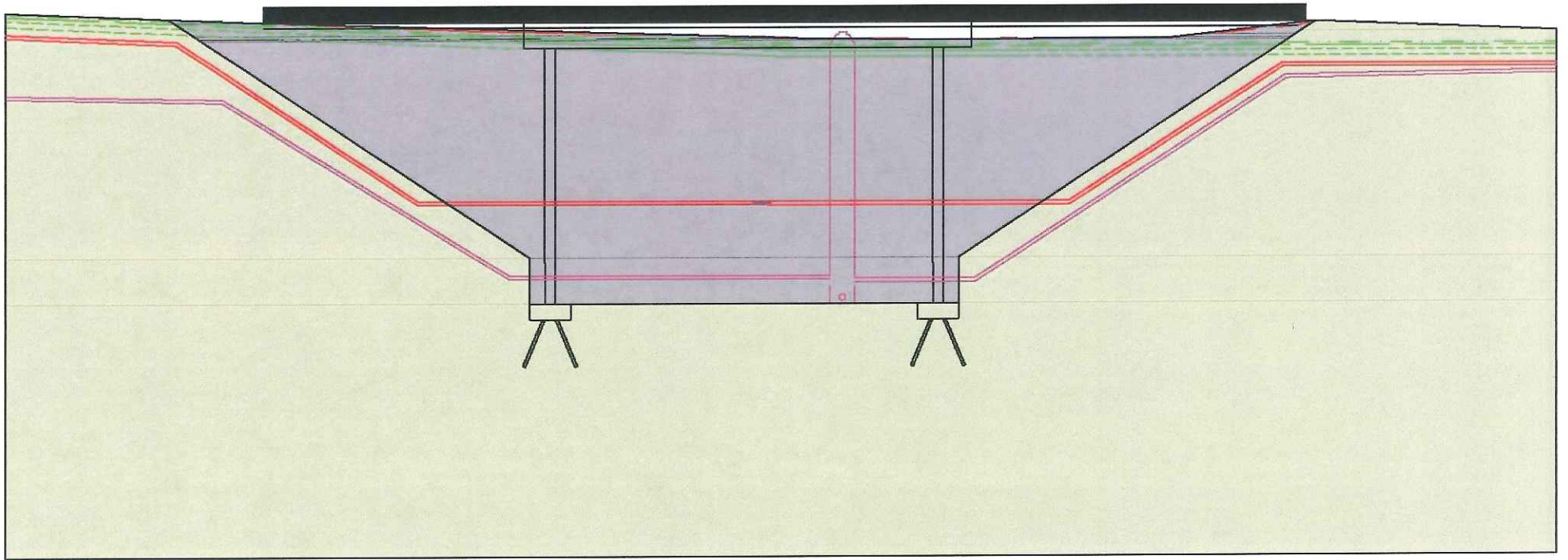
Culvert Fill Area



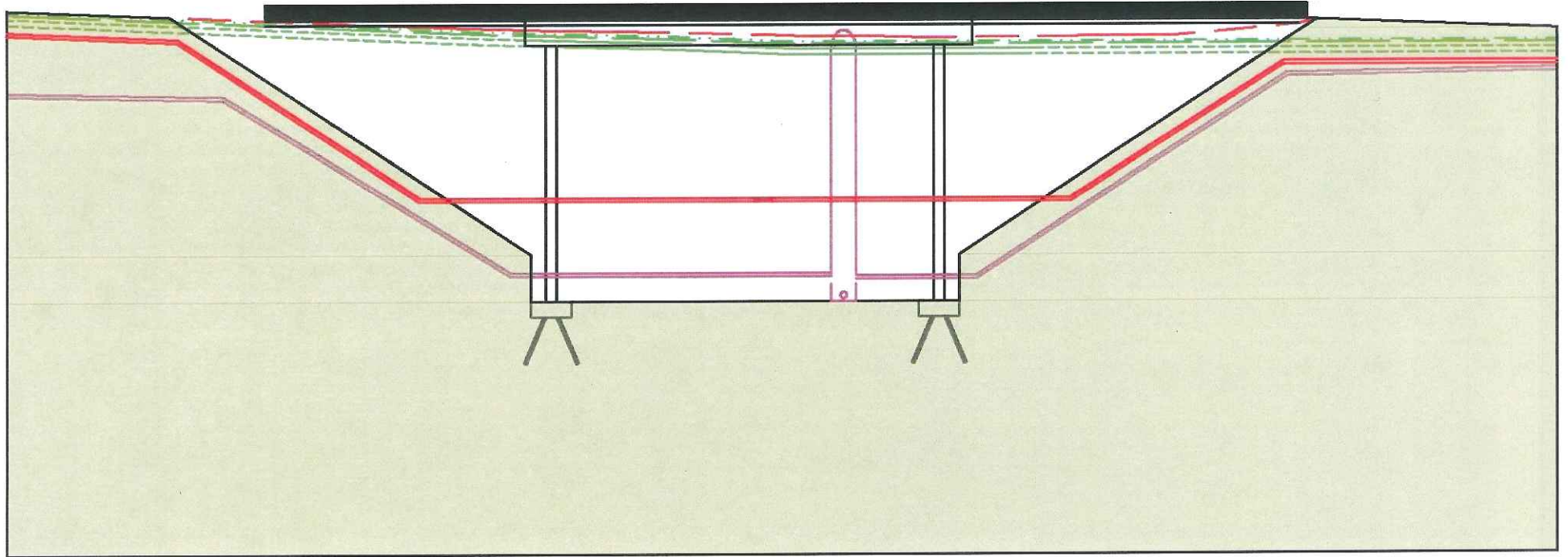
Existing Conditions



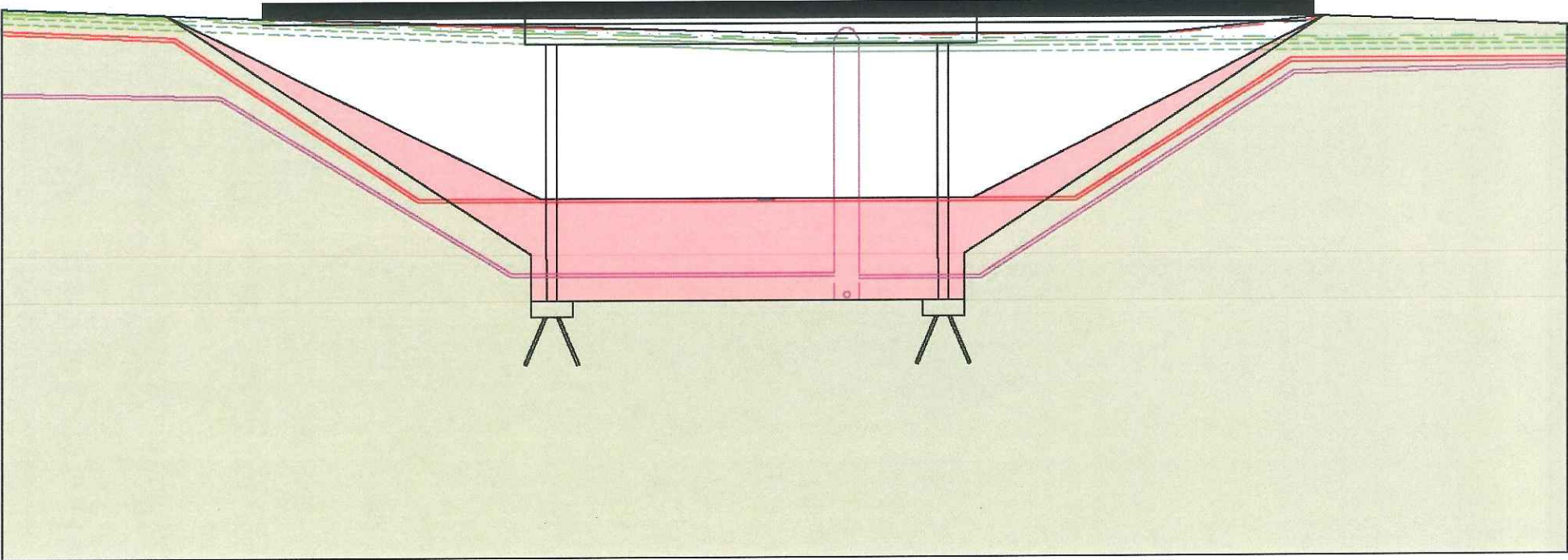
Bridge Excavation Area



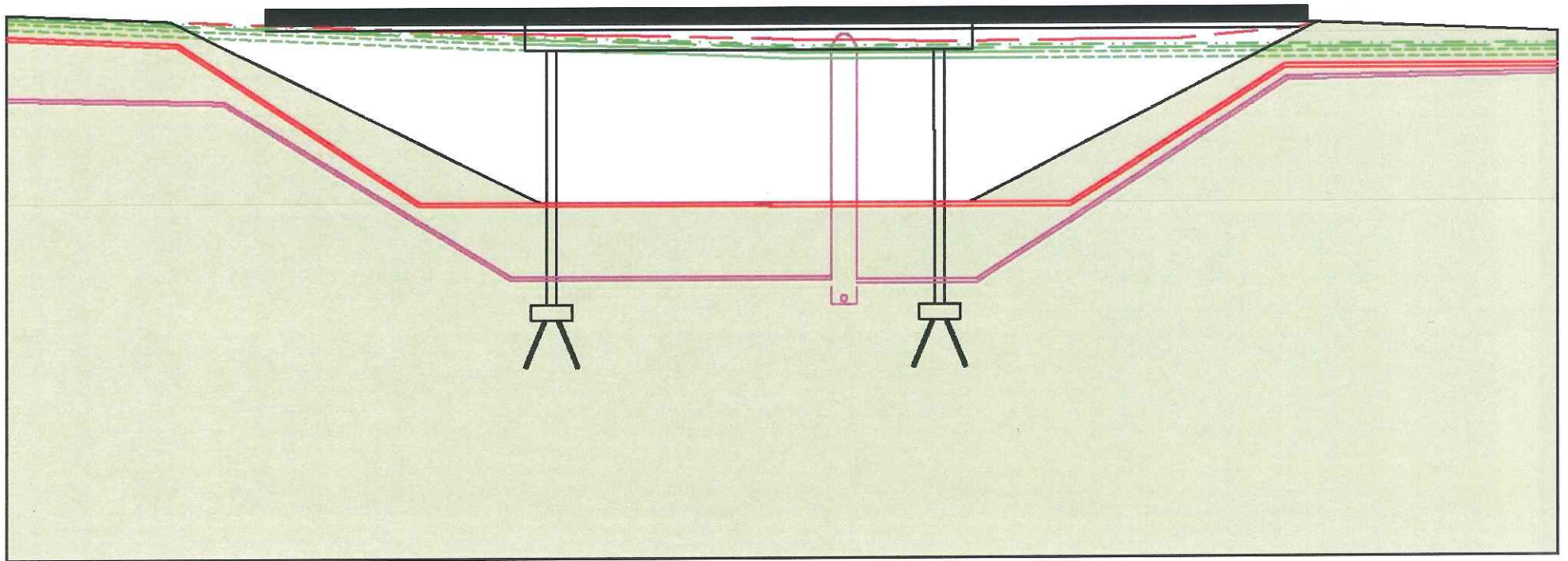
Bridge Work Area



Bridge Fill Area



Bridge Complete



Timing

	Concrete Culvert w/o Bridge & Rerouting Utilities	Bridge w/ Rerouted Utilities
	Weeks	Weeks
Design & Engineering	0	20
Bid & BOT Approval	1	4
Award & Contract	5	5
Shop Dwgs & Pre-Construction	8	8
Permits	0	6
Reroute Utilities	0	10
Weather	1	4
Construction	16	24
Total (several occur concurrently)	31	81
Completion Date, Starting March 15, 2015	October 2015	September 2016
Major Utility Shut Downs - Buildings Effected	5	5
Number of total days needed for shut downs	3	10
Minor Utility Shut Downs - Buildings Effected	Campus	Campus
Number of 3 hour shut downs	2	4

Cost

	Preliminary Culvert Estimate	After Bids Culvert	70' Bridge
Construction	\$ 2,835,000	\$ 2,217,736	\$ 3,880,367
Contingency	\$ 584,000	\$ 443,464	\$ 757,801
Professional & Testing Fees	\$ 379,000	\$ 210,000	\$ 350,000
Permits	\$ 100,000	\$ -	\$ 114,450
TOTAL	\$ 3,898,000	\$ 2,871,200	\$ 5,102,618

Pros and Cons

Culvert

- Risk of Damage to County Sewer – Minimal
- DEQ Wetland Mitigation – None
- Impedes Ravine Flow – Greater
- Interruption to Traffic During Construction - Primarily during summer
- Utility Work - Minimal
- Safety Risk – Minimal
- Maintenance - Less
- Time to Construct - Less
- Visual Impact - Less
- Cost - Less

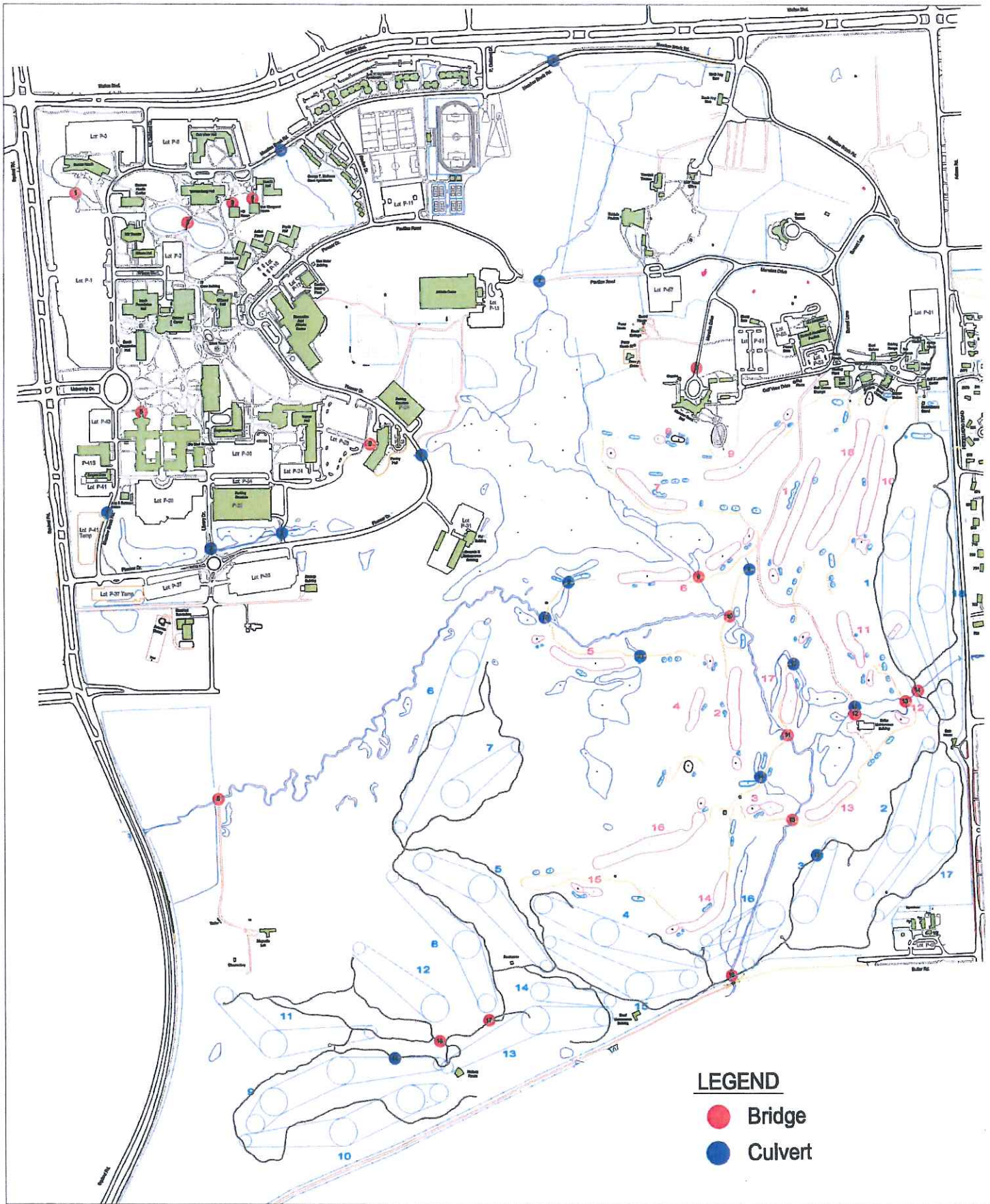
Bridge

- Risk of Damage to County Sewer – Higher
- DEQ Wetland Mitigation – Required
- Impedes Ravine Flow – None
- Interruption to Traffic During Construction – Significant during school year
- Utility Work - Significant
- Safety Risk – higher (potential jumpers)
- Maintenance - More
- Time to Construct – More
- Visual Impact – Moderate
- Cost - More

Summary

- Bridge construction would take an additional year to construct putting the temporary repairs at risk.
- Bridge Construction has a much larger impact on students and traffic flow on campus because of the length of construction during the school year.
- The life cycle (maintenance and replacement) cost for a 75 year bridge vs 100 year culvert is much greater.
- Bridge would cost more to build.
- Analysis and conclusions based on professional consultation and recommendations from SME-USA (Soil and Materials Engineers, Inc.)

Oakland University - Rochester, MI					
Bridges & Culverts					
March 13, 2015					
Bridges		Material	Culverts		Material
1	Near Human Health Bldg.	Steel	1	MB Dr. @ Hamlin Hall	Precast
2	Bear Lake	Concrete	2	MB Dr. betw. Up. Fields & MBMF	
3	Hill House	Steel	3	MB Dr. South of P-41	
4	Van Wagoner House	Steel	4	Library Dr. North of Roundabout	Precast
5	Hannah Hall North Entrance	Concrete	5	Varnier Dr. North of Pioneer Dr.	Galvanized
6	Pawley Hall West Entrance	Concrete	6	Pioneer Dr. South of P-29	
7	Meadow Brook Hall Entrance	Concrete	7	Pavilion Rd. near Athl. Dome	Galvanized
8	Near Magnetic Lab		8	Golf Course - Katke 1 Hole	
9	Golf Course - Katke 6 Hole	Steel Beams	9	Golf Course - Katke 6 Hole	
10	Golf Course - Large Bridge	Precast	10	Golf Course - Katke 5 Hole	
11	Golf Course - Katke 17 Hole	Steel Beams	11	Golf Course - Katke 5 Hole	
12	Golf Course - Maintenance Bldg.	Steel Beams	12	Golf Course - Katke 17 Hole	
13	Golf Course - Katke 12 Hole	Wood	13	Golf Course - Maintenance Bldg.	
14	Golf Course - Sharf 1 Hole	Wood	14	Golf Course - Katke 3 Hole	
15	Golf Course - Katke 13 Hole	Steel Beams	15	Golf Course - Shart 3 Hole	
16	Golf Course - Sharf 16 Hole	Wood			
17	Golf Course - Sharf 8 Hole	Wood			
18	Golf Course - Sharf 12 Hole	Wood			



Oakland University



Meadow Brook Culvert Bid

ITEM	DESCRIPTION	QTY	UNIT	IAFRATE	
				UNIT PRICE	EXTENSION
101	Place catchbasin filter per city/county standards	4	EA	\$ 125.00	\$ 500.00
102	Install silt fence. Remove after project restoration is established per WRC.	1	LS	\$ 15,000.00	\$ 15,000.00
103	Install traffic control barricades, detour signage, Jersey Barriers, pedestrian barricades/signs, construction fencing and minor traffic control devices, (Maintenance of all control elements to be included in General Conditions below)	1	LS	\$ 7,500.00	\$ 7,500.00
104	Remove and salvage existing light pole and handholes (Store salvaged items at Owner Designated Location for Contractor Reinstallation)	1	LS	\$ 5,000.00	\$ 5,000.00
105	Sawcut and remove existing AC Pavement, including catch basins, storm sewer, geogrid underdrain, etc.	400	SY	\$ 20.00	\$ 8,000.00
106	Sawcut and remove existing PCC curb & gutter	300	LF	\$ 5.00	\$ 1,500.00
107	Sawcut and remove existing PCC sidewalk	4,010	SF	\$ 2.50	\$ 10,025.00
108	Remove Ex. chain link fence	300	LF	\$ 4.00	\$ 1,200.00
109	Clear and grub embankment within the general limits of the Stage 1 pre-cut excavation and includes removal of all Trees (sizes shown on plans, but not called out separately). Areas outside of these general limits shall remain undisturbed for soil erosion protection until slope embankment filling is to occur during restoration and backfilling stage.	1	LS	\$ 32,000.00	\$ 32,000.00
110	Install new gate well and valves over existing 8" watermain as shown.	2	EA	\$ 4,800.00	\$ 9,600.00
111	Dewater ex. 8" watermain and remove between new gate well and valves.	240	LF	\$ 8.00	\$ 1,920.00
112	Perform Stage 1 excavation of embankment to elevation 900 per plans. Dispose of excavated material off site.	1	LS	\$ 75,000.00	\$ 75,000.00
113	During Stage 1 Excavation: Install Contractor Designed utility support across excavation. Contractor to submit design to Owner's Engineer for approval. The following utilities shall be supported and protected during construction to maintain in operable condition: [OU Sanitary sewers / sanitary sewer manholes (2), county sanitary sewer, fiber-optic cable, electrical duct bank (concrete encasement to be demolished) and temporary above grade storm sewer to stream]. The remaining utilities shall be removed and re-installed following backfilling of excavation.	1	LS	\$ 15,000.00	\$ 15,000.00
114	TEMPORARY EARTH RETENTION SYSTEM: Install Contractor Designed Temporary Earth Retention System (TERS). Contractor to submit design to Owner's Engineer for Approval (Contractor shall coordinate CCTV of County sanitary sewer following TERS install).	1	LS	\$ 350,000.00	\$ 350,000.00
115	Perform Stage 2 excavation to bottom of proposed culvert bedding elevation. Dispose of excavated material off site.	1	LS	\$ 140,000.00	\$ 140,000.00
116	Provide temporary stream conveyance measures (bulkhead structures/ flume/pumping/by-pass piping) to convey flow around the work zone during construction. Contractor to submit temporary stream conveyance plan and schedule to Owner's Engineer for review. Submittal to be reviewed and approved by Owner and the MDEQ (See Special Provision – Construction Dam & Bypass Pumping 912RC704(A005))	1	LS	\$ 25,000.00	\$ 25,000.00
117	Remove and Dispose of Structural Plate Elliptical Culvert and interior support columns, braces and accessories.	1	LS	\$ 30,000.00	\$ 30,000.00
118	ALLOWANCE: Perform subgrade undercutting and backfill for Box Culvert Alignment per Owner's direction (ex. 1" x 3" on embankment may be salvaged and re-used).	680	CY	\$ 50.00	\$ 34,000.00
119	Install Culv, Precast Conc Box, 10 foot by 9 foot (225 LF) including Wingwalls with Aprons (N. apron 7 feet and S apron 17 ft). Contractor shall provide design to Owner's rep. for approval prior to manufacturing. Unit price shall include all items specified in Special Provision 12DS401(D570) and contract documents.	249	LF	\$ 1,400.00	\$ 348,600.00
120	Install culvert bedding per plan and details.	1	LS	\$ 21,000.00	\$ 21,000.00
121	Install 6" foundation drain along both sides of Box Culvert Outlet to stream.	450	LF	\$ 10.00	\$ 4,500.00
122	Install Headwall, north and south ends	1	LS	\$ 5,000.00	\$ 5,000.00
123	Install misc. cast in place concrete for culvert and apron foundation per MDOT Section 706, Structural Concrete.	35	CY	\$ 285.00	\$ 9,975.00
124	Install 1-foot thick river rock in interior of Culvert and aprons (full length and width).	249	LF	\$ 45.00	\$ 11,205.00
125	Perform Stream improvements to include re-alignment, cross-vanes, and rock ramps per plans and details.	1	LS	\$ 65,000.00	\$ 65,000.00
126	Install Rip-Rap at Culvert ends (See Special Provision for RIPRAP SPECIAL, 12DS813(D820))	465	SY	\$ 68.00	\$ 31,620.00
127	Remove temporary stream conveyance measures and return stream to prop. culvert / stream alignment (after DEQ has reviewed and approved the stream improvement measures)	1	LS	\$ 6,000.00	\$ 6,000.00
128	Rebuild sanitary manhole structures S04 and S05 full depth per county standards.	2	EA	\$ 3,000.00	\$ 6,000.00
129	Perform backfilling of culvert to within 3 feet of top of TERS system. (Backfill with MDOT Class II sand per specification)	1	LS	\$ 345,000.00	\$ 345,000.00
130	Remove existing TERS system as necessary to facilitate site restoration. (Contractor to coordinate CCTV of County Sanitary Sewer)	1	LS	\$ 3,000.00	\$ 3,000.00
131	Prepare existing slope for embankment fill and slope extension including benching per MDOT specifications. Includes clear and grub (beyond limits of Stage 1 C&G) of existing slope.	1	LS	\$ 3,000.00	\$ 3,000.00
132	Install 4' dia. Storm manhole w/ Frame and Cover on slope, per county detail.	6	EA	\$ 2,100.00	\$ 12,600.00

ITEM	DESCRIPTION	QTY	UNIT	IAFRATE	
				UNIT PRICE	EXTENSION
133	Install 12" storm sewer in embankment. Coordinate outlet of pipe through wing wall of prop. Culvert.	138	LF	\$ 78.00	\$ 10,764.00
134	Install embankment fill to extend slope and backfill to top of subgrade elevation (bottom of road section).	1	LS	\$ 50,000.00	\$ 50,000.00
135	Perform Lawn Restoration topsoil, lawn seed and w/ mulch blanket.	235	SY	\$ 11.00	\$ 2,585.00
136	Perform slope restoration, including topsoil, high velocity mulch blanket and meadow lawn seed mix per plan.	2,900	SY	\$ 8.00	\$ 23,200.00
137	Stream Bank restoration with Bank Stabilization Seed Mix (Per county).	1	LS	\$ 5,750.00	\$ 5,750.00
138	Install 8" WM between new gate well and valves; includes all flushing and testing to return to operation.	240	LF	\$ 65.00	\$ 15,600.00
139	Install New 4-ft diameter Catch Basins (Road) with frame and cover, includes 325 lf of 6" dia. Edgedrain, tapped into structures.	2	EA	\$ 3,000.00	\$ 6,000.00
140	Install 2-ft diameter inlet catch basin (Road) with frame and cover.	2	EA	\$ 1,300.00	\$ 2,600.00
141	Install 12" storm sewer for road drainage structures.	86	LF	\$ 45.00	\$ 3,870.00
142	Install 24" storm sewer (37 ft) (with 24" diameter end section with rip rap)- Remove tree, etc.	1	LS	\$ 3,500.00	\$ 3,500.00
143	Install New Chain Link Fence and Posts (Match Ex. Fence type and layout).	300	LF	\$ 40.00	\$ 12,000.00
144	Reinstall Ex. Stored Light pole on proposed Concrete Base. Includes pulling of new wiring in new conduit, wiring and testing to confirm operation per specification.	1	EA	\$ 13,000.00	\$ 13,000.00
145	Install Medium duty asphalt pavement. Per detail.	400	SY	\$ 68.00	\$ 27,200.00
146	Install PCC curb and gutter	300	LF	\$ 20.00	\$ 6,000.00
147	Install PCC Sidewalk - 6 inches concrete over 6 inches of MDOT Class II sand (or 6-inches MDOT 21AA CLS).	4,010	SF	\$ 7.20	\$ 28,872.00
148	Paint Striping - Double Application	1	LS	\$ 750.00	\$ 750.00
149	Coordinate with Oakland WRC - Provide access to WRC to perform CCTV inspection of County Owned Sanitary Sewer line. Inspection by WRC shall occur a min. of two times or as required by WRC. Contractor shall pay inspection fees and shall be reimbursed by OU using allowance Item 152.	1	LS	\$ 2,500.00	\$ 2,500.00
150	General Conditions / Mobilization /Private Utility Locate /Maintenance of Traffic Control /Barricades /Meetings/ Superintendent	1	LS	\$ 185,000.00	\$ 185,000.00
151	General site Clean-up and restoration.	1	LS	\$ 3,000.00	\$ 3,000.00
152	Permit Allowance. [MDEQ and Oakland WRC]. Contractor to submit receipt with amount paid. Labor to obtain permit considered incidental to obtaining permit.	1	Allow.	\$ 25,000.00	\$ 25,000.00
153	ALLOWANCE: Contractor to furnish and install temporary generator(s) for USA/Nicholson Apartment complex (Northeast of ravine). Allowance to include connection and operation /servicing/fueling of generators and disconnection upon return of electrical service to apartments.	1	Allow.	\$ 50,000.00	\$ 50,000.00
Base Bid Total					\$ 2,110,936.00

ALTERNATE BID (2): \$ 25,000.00
ALTERNATE BID (3): \$ 65,000.00
ALTERNATE BID (4): \$ 16,800.00

Total \$ 2,217,736.00

Activity ID	Activity Name	Remaining Duration	Start	Finish	
Project: 150013 OU Meadowbrook Culvert Replac		130.88	02-Feb-2015	03-Aug-2015	03.Aug.
A099	Notice of intent to award	0.00	02-Feb-2015*	02-Feb-2015	Notice of intent to award
A1010	Prepare + Submit Stream Conveyance	7.00	02-Feb-2015	10-Feb-2015	Prepare + Submit Stream Conveyance
A1011	Prepare + Submit Box Culvert	7.00	02-Feb-2015	10-Feb-2015	Prepare + Submit Box Culvert
A1012	Prepare + Submit TERS	7.00	02-Feb-2015	10-Feb-2015	Prepare + Submit TERS
A1013	Contract award and return approved submittals	0.00	13-Mar-2015*	13-Mar-2015	Contract award and return approved submittals
A1030	Manufacture Culvert	40.00	13-Mar-2015	07-May-2015	Manufacture Culvert
A1040	Install SESC measures	2.00	13-Mar-2015*	16-Mar-2015	Install SESC measures
A1041	Coordinate CCTV inspection	1.00	17-Mar-2015	17-Mar-2015	Coordinate CCTV inspection
A1050	Install traffic control devices	1.00	04-May-2015*	04-May-2015	Install traffic control devices
A1051	Clear + Grub	5.00	05-May-2015	11-May-2015	Clear + Grub
A1059	Remove Road + Curb and Gutter + Sidewalk	3.00	12-May-2015	14-May-2015	Remove Road + Curb and Gutter + Sidewalk
A1070	Excavation to Elev. 900	5.00	15-May-2015	21-May-2015	Excavation to Elev. 900
A1080	Install contractor TERS system	20.00	22-May-2015	13-Jun-2015	Install contractor TERS system
A1100	Excavation to 874	15.00	25-May-2015	15-Jun-2015	Excavation to 874
A1110	Install temp stream conveyance measures	15.00	25-May-2015	15-Jun-2015	Install temp stream conveyance measures
A1120	Remove existing culvert	15.00	26-May-2015	16-Jun-2015	Remove existing culvert
A1140	Perform subgrade improvements	2.00	16-Jun-2015	18-Jun-2015	Perform subgrade improvements
A1141	Culvert Undercut	2.00	18-Jun-2015	22-Jun-2015	Culvert Undercut
A1142	Install Box Culvert	4.00	22-Jun-2015	26-Jun-2015	Install Box Culvert
A11421	Install stream improvements to include stream realign	5.00	26-Jun-2015	03-Jul-2015	Install stream improvements to include stream realign
A1143	Backfill over Culvert to Elev. 900	5.00	23-Jun-2015	30-Jun-2015	Backfill over Culvert to Elev. 900
A1144	Remove TERS (Partial)	1.00	30-Jun-2015	01-Jul-2015	Remove TERS (Partial)
A1145	Backfill to Subgrade	3.00	01-Jul-2015	06-Jul-2015	Backfill to Subgrade
A1146	Slope Fill with Benches	3.00	06-Jul-2015	09-Jul-2015	Slope Fill with Benches
A1147	Install Slope Drainage	2.00	09-Jul-2015	13-Jul-2015	Install Slope Drainage
A1260	Perform slope restoration	2.00	13-Jul-2015	15-Jul-2015	Perform slope restoration
A1270	Install Ductbank	2.00	15-Jul-2015	17-Jul-2015	Install Ductbank
A1280	Install Watermain	2.00	17-Jul-2015	21-Jul-2015	Install Watermain
A1290	Install Roadway Storm Sewers	1.00	21-Jul-2015	22-Jul-2015	Install Roadway Storm Sewers
A1291	Install Roadway per section	7.00	22-Jul-2015	31-Jul-2015	Install Roadway per section
A1300	Final clean up	1.00	31-Jul-2015	03-Aug-2015	Final clean up

■ Actual Work ■ Critical Remaining ...
■ Remaining Work ◆ Milestone

Meadow Brook Estimate - Bridge

ITEM	DESCRIPTION	QTY	UNIT	UNIT PRICE	EXTENSION
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UTILITY RE-ROUTING

WATER	470 FT	\$	200.00	\$	94,000.00
SANITARY	550 FT	\$	200.00	\$	110,000.00
MANHOLES	12 EA	\$	11,500.00	\$	138,000.00
ELECTRIC	600 FT	\$	400.00	\$	240,000.00
FIBER	600 FT	\$	200.00	\$	120,000.00
BASE REROUTING (same as Culvert Bld)				\$	741,361.00
				SUBTOTAL	\$ 1,443,361.00

EARTHWORK

EXCAVATION	29,167 CY	\$	17.25	\$	503,125.00
STRUCTRUAL FILL AREA	13,889 CY	\$	17.50	\$	243,055.56
BACKFILL STRUCTURE	13,889 CY	\$	18.75	\$	260,416.67
				SUBTOTAL	\$ 1,006,597.22

BRIDGE

_ Cofferdams, Modified	1 LSUM	\$	90,000.00	\$	90,000.00
Pile Driving Equipment, Furn	1 LSUM	\$	50,000.00	\$	50,000.00
Pile, Steel, Furn and Driven, 12 inch	4,000 Ft	\$	19.00	\$	76,000.00
Test Pile, Steel, 12 inch	4 Ea	\$	2,410.00	\$	9,640.00
Pile Point, Steel	50 Ea	\$	200.00	\$	10,000.00
Pile, Steel, Splice	50 Ea	\$	100.00	\$	5,000.00
Conc, Grade T	356 Cyd	\$	175.00	\$	62,222.22
Reinforcement, Steel, Epoxy Coated	317,667 Lb	\$	1.10	\$	349,433.33
Substructure Conc	1,154 Cyd	\$	429.48	\$	495,619.92
Superstructure Conc	117 Cyd	\$	145.00	\$	16,916.67
Superstructure Conc, Form, Finish, and Cur	1 LSUM	\$	14,960.00	\$	14,960.00
Superstructure Conc, Form, Finish, and Cur	1 LSUM	\$	39,000.00	\$	39,000.00
Superstructure Conc, Night Casting	117 Cyd	\$	145.00	\$	16,916.67
_ Structure Name Plate	1 Ea	\$	850.00	\$	850.00
Bearing, Elastomeric, 1 1/2 inch	1,500 Sin	\$	1.00	\$	1,500.00
Prest Conc I Beam, Furn, 36 inch	770 Ft	\$	190.00	\$	146,300.00
Prest Conc I Beam, Erect, 36 inch	770 Ft	\$	20.00	\$	15,400.00
Joint Waterproofing	500 Sft	\$	7.00	\$	3,500.00
Joint Waterproofing, Expansion	250 Sft	\$	7.00	\$	1,750.00
Conc Surface Coating	1 LSUM	\$	10,000.00	\$	10,000.00
Bridge Railing, 2 Tube	140 Ft	\$	110.00	\$	15,400.00
				SUBTOTAL	\$ 1,430,408.81

TOTAL	\$ 3,880,367.03
CONTINGENCY	\$ 757,801.00
ENGINEERING & TESTING	\$ 350,000.00
PERMITS	\$ 114,450.00
GRANG TOTAL	\$ 5,102,618.03

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105	Sawcut and remove existing AC Pavement, including catch basins, storm sewer, geogrid underdrain, etc.	400	SY	\$ 20.00	\$ 8,000.00
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117	Remove and Dispose of Structural Plate Elliptical Culvert and interior support columns, braces and accessories.	1	LS	\$ 30,000.00	\$ 30,000.00
118	ALLOWANCE: Perform subgrade undercutting and backfill for Box Culvert Alignment per Owner's direction (ex. 1" x 3" on embankment may be salvaged and re-used).	680	CY	\$ 50.00	\$ 34,000.00
119	Install Culv. Precast Conc Box, 10 foot by 9 foot (225 LF) including Wingwalls with Aprons (N. apron 7 feet and S apron 17 ft). Contractor shall provide design to Owner's rep. for approval prior to manufacturing. Unit price shall include all items specified in Special Provision 12DS401(D570) and contract documents.		LF	\$ 1,400.00	\$ -
120	Install culvert bedding per plan and details.		LS	\$ 21,000.00	\$ -
121	Install 6" foundation drain along both sides of Box Culvert Outlet to stream.	450	LF	\$ 10.00	\$ 4,500.00
122	Install Headwall, north and south ends		LS	\$ 5,000.00	\$ -
123	Install misc. cast in place concrete for culvert and apron foundation per MDOT Section 706, Structural Concrete.		CY	\$ 285.00	\$ -
124	Install 1-foot thick river rock in interior of Culvert and aprons (full length and width).	249	LF	\$ 45.00	\$ 11,205.00
125	Perform Stream improvements to include re-alignment, cross-vanes, and rock ramps per plans and details.	1	LS	\$ 65,000.00	\$ 65,000.00
126	Install Rip-Rap at Culvert ends (See Special Provision for RIPRAP SPECIAL, 12DS813(D820))	465	SY	\$ 68.00	\$ 31,620.00
127	Remove temporary stream conveyance measures and return stream to prop. culvert / stream alignment (after DEQ has reviewed and approved the stream improvement measures)	1	LS	\$ 6,000.00	\$ 6,000.00
128	Rebuild sanitary manhole structures S04 and S05 full depth per county standards.	2	EA	\$ 3,000.00	\$ 6,000.00
129	Perform backfilling of culvert to within 3 feet of top of TERS system. (Backfill with MDOT Class II sand per specification)		LS	\$ 345,000.00	\$ -
130	Remove existing TERS system as necessary to facilitate site restoration. (Contractor to coordinate CCTV of County Sanitary Sewer)	1	LS	\$ 3,000.00	\$ 3,000.00
131	Prepare existing slope for embankment fill and slope extension including benching per MDOT specifications. Includes clear and grub (beyond limits of Stage 1 C&G) of existing slope.	1	LS	\$ 3,000.00	\$ 3,000.00
132	Install 4' dia. Storm manhole w/ Frame and Cover on slope, per county detail.	6	EA	\$ 2,100.00	\$ 12,600.00

ITEM	DESCRIPTION	QTY	UNIT	IAFRATE	
				UNIT PRICE	EXTENSION
133	Install 12" storm sewer in embankment. Coordinate outlet of pipe through wing wall of prop. Culvert.	138	LF	\$ 78.00	\$ 10,764.00
134	Install embankment fill to extend slope and backfill to top of subgrade elevation (bottom of road section).	1	LS	\$ 50,000.00	\$ 50,000.00
135	Perform Lawn Restoration topsoil, lawn seed and w/ mulch blanket.	235	SY	\$ 11.00	\$ 2,585.00
136	Perform slope restoration, including topsoil, high velocity mulch blanket and meadow lawn seed mix per plan.	2,900	SY	\$ 8.00	\$ 23,200.00
137	Stream Bank restoration with Bank Stabilization Seed Mix (Per county).	1	LS	\$ 5,750.00	\$ 5,750.00
138	Install 8" WM between new gate well and valves; includes all flushing and testing to return to operation.	240	LF	\$ 65.00	\$ 15,600.00
139	Install New 4-ft diameter Catch Basins (Road) with frame and cover, includes 325 lf of 6" dia. Edgedrain, tapped into structures.	2	EA	\$ 3,000.00	\$ 6,000.00
140	Install 2-ft diameter inlet catch basin (Road) with frame and cover.	2	EA	\$ 1,300.00	\$ 2,600.00
141	Install 12" storm sewer for road drainage structures.	86	LF	\$ 45.00	\$ 3,870.00
142	Install 24" storm sewer (37 ft) (with 24" diameter end section with rip rap)- Remove tree, etc.	1	LS	\$ 3,500.00	\$ 3,500.00
143	Install New Chain Link Fence and Posts (Match Ex. Fence type and layout).	300	LF	\$ 40.00	\$ 12,000.00
144	Reinstall Ex. Stored Light pole on proposed Concrete Base. Includes pulling of new wiring in new conduit, wiring and testing to confirm operation per specification.	1	EA	\$ 13,000.00	\$ 13,000.00
145	Install Medium duty asphalt pavement. Per detail.	400	SY	\$ 68.00	\$ 27,200.00
146	Install PCC curb and gutter	300	LF	\$ 20.00	\$ 6,000.00
147	Install PCC Sidewalk - 6 inches concrete over 6 inches of MDOT Class II sand (or 6-inches MDOT 21AA CLS).	4,010	SF	\$ 7.20	\$ 28,872.00
148	Paint Striping - Double Application	1	LS	\$ 750.00	\$ 750.00
149	Coordinate with Oakland WRC - Provide access to WRC to perform CCTV inspection of County Owned Sanitary Sewer line. Inspection by WRC shall occur a min. of two times or as required by WRC. Contractor shall pay inspection fees and shall be reimbursed by OU using allowance Item 152.	1	LS	\$ 2,500.00	\$ 2,500.00
150	General Conditions / Mobilization /Private Utility Locate /Maintenance of Traffic Control /Barricades /Meetings/ Superintendent	1	LS	\$ 185,000.00	\$ 185,000.00
151	General site Clean-up and restoration.	1	LS	\$ 3,000.00	\$ 3,000.00
152	Permit Allowance. [MDEQ and Oakland WRC]. Contractor to submit receipt with amount paid. Labor to obtain permit considered incidental to obtaining permit.		Allow.	\$ 25,000.00	\$ -
153	ALLOWANCE: Contractor to furnish and install temporary generator(s) for USA/Nicholson Apartment complex (Northeast of ravine). Allowance to include connection and operation /servicing/fueling of generators and disconnection upon return of electrical service to apartments.		Allow.	\$ 50,000.00	
Base Bid Total					\$ 741,361.00



Development, Alumni and Community Engagement

To: Scott Kunselman, Trustee
From: Eric Barritt, Vice President of Development, Alumni, and Community Engagement
Date: March 16, 2015
Re: Potential for philanthropic support for a bridge on Meadow Brook Road

A handwritten signature in black ink, appearing to read "Eric Barritt", located to the right of the "From:" line.

This memo is in response to your request for an assessment of the potential interest and viability of raising money for and/or naming a bridge over the culvert on Meadow Brook Road.

The Oakland University Gift Policy approved by the Board of Trustees on May 7, 2014 outlines the conditions for naming structures. The policy states a gift of 25 percent of the actual cost is required for a structure to be named as the donor desires. At least 50 percent of the gift must be from liquid assets, and no more than 50 percent may be in an irrevocable bequest. The liquid portion of the gift must be paid in no more than five years from the beginning of the gift agreement.

Based on the preliminary estimated bridge costs (\$5,102,618), a gift of \$1,275,000 to support the construction of the bridge would be required for it to be a "named gift," per the current Board approved policy outlined above. Historically speaking, donors have chosen to provide gifts to name prominent and iconic structures on campus (e.g. Elliott Tower, Pawley Hall, R & S Sharf Golf Course), and have done so through many years of cultivation, stewardship, and engagement. Presently, there is only one named bridge on campus, and that was a much smaller project. That bridge is highly visible as it leads students into the new Human Health Building. It is not very likely for a donor to have a passion for a bridge, over the culvert on Meadow Brook Road, to provide such a large gift to name it. Furthermore, at this time, I am not aware of any potential donors for a project such as this. Given the competing philanthropic needs for such things as scholarships, professorships, research funds, programmatic support, etc., I do not anticipate we would receive a gift greater than one million dollars in the short-term. Long-term, it may be something that alumni and donors would like to support. Again, I would not count on an immediate gift to assist with funding the project, as any gift that we would receive would likely be a pledge over a five-year period and could involve some form a planned gift such as a bequest. Based on my past experience, facilities and capital expenses are often the hardest projects to raise money for, especially those that are not driven by the donor.

All that said, however unlikely a naming gift is, we could include it as a potential opportunity for support in the upcoming campaign.