

WATER IMPOUNDMENT 596-32C
MARATHON OIL COMPANY
AS-CONSTRUCTED CONSTRUCTION PLANS
 LOCATED IN SECTION 32, TOWNSHIP 5 SOUTH, RANGE 96 WEST OF THE 6TH PRINCIPAL MERIDIAN
 GARFIELD COUNTY, STATE OF COLORADO

AS-CONSTRUCTED

RECORD DRAWING
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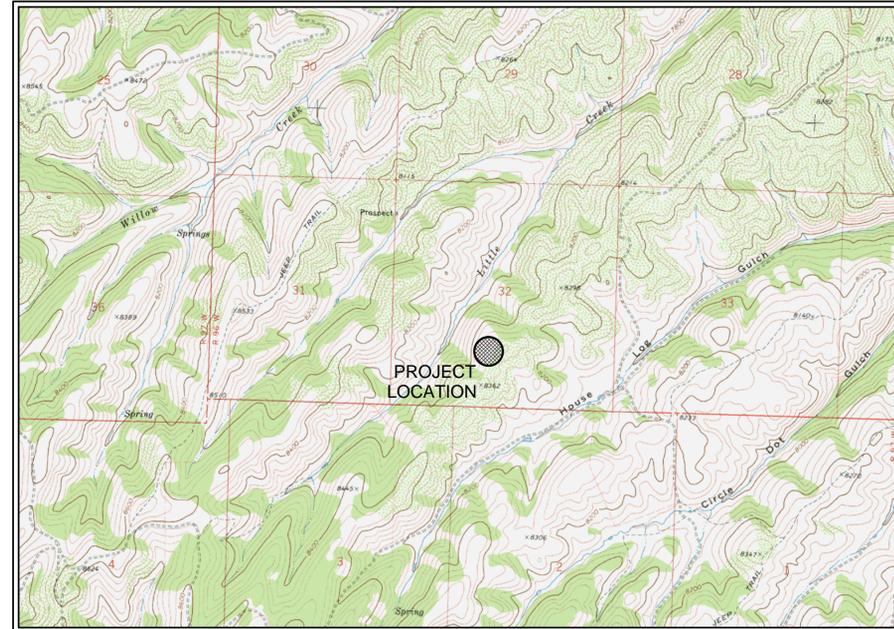
AS-CONSTRUCTED INFORMATION PROVIDED TO OLSSON ASSOCIATES BY MARATHON OIL COMPANY ON 10.31.2013

CONTACT LIST:

OWNER:
 MARATHON OIL COMPANY
 743 HORIZON COURT, SUITE 220
 GRAND JUNCTION, CO 81506
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 CONTACT: ERIC WARD

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ENGINEER:
 OLSSON ASSOCIATES
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VICINITY MAP
 SCALE: 1"=2000'

GENERAL NOTES

- ALL WORK WITHIN PUBLIC RIGHTS-OF-WAY AND/OR EASEMENT AND ALL ON-SITE UTILITY WORK SHALL CONFORM TO THE TECHNICAL SPECIFICATIONS AND DESIGN CRITERIA FOR PUBLIC IMPROVEMENT PROJECTS OF GARFIELD COUNTY AND THE GRANTOR OF THE EASEMENT.
- ALL MATERIALS AND WORKMANSHIP SHALL BE IN CONFORMANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF THE APPROPRIATE GOVERNING AGENCY. THE CONTRACTOR SHALL HAVE IN HIS POSSESSION AT ALL TIMES (1) SIGNED COPY OF THE PLANS, STANDARDS, AND SPECIFICATIONS AS APPROVED BY THE APPROPRIATE GOVERNING AGENCY. THE CONTRACTOR SHALL OBTAIN WRITTEN APPROVAL FOR ANY VARIANCE TO THE ABOVE DOCUMENTS.
- THE CONTRACTOR SHALL OBTAIN, AT HIS OWN EXPENSE, ALL APPLICABLE CODES, LICENSES, STANDARDS, PERMITS, BONDS, ETC. WHICH ARE NECESSARY TO PERFORM THE PROPOSED WORK.
- THE EXISTING UTILITY LOCATIONS SHOWN ON THE PLANS ARE APPROXIMATE AND MAY NOT INCLUDE ALL LINES PRESENT. THE CONTRACTOR WILL BE RESPONSIBLE FOR CALLING THE UTILITY NOTIFICATION CENTER OF COLORADO AT 811 AND COORDINATING FIELD LOCATIONS OF EXISTING UNDERGROUND UTILITIES PRIOR TO BEGINNING GRADING AND UTILITY WORK.
- LOCATIONS AND ELEVATIONS OF EXISTING IMPROVEMENTS TO BE MET (OR AVOIDED) BY WORK TO BE DONE SHALL BE CONFIRMED BY THE CONTRACTOR THROUGH FIELD EXPLORATIONS PRIOR TO CONSTRUCTION. CONTRACTOR SHALL REPORT TO THE ENGINEER ANY DISCREPANCIES BETWEEN HIS MEASUREMENTS AND THESE PLANS.
- ANY CONSTRUCTION DEBRIS OR MUD DROPPED INTO MANHOLES, INLETS, PIPES OR TRACKED ONTO EXISTING ROADWAYS SHALL BE REMOVED IMMEDIATELY BY THE CONTRACTOR. THE CONTRACTOR SHALL REPAIR ANY EXCAVATIONS OR PAVEMENT FAILURES CAUSED BY HIS CONSTRUCTION. THE CONTRACTOR SHALL PROPERLY BARRICADE THE CONSTRUCTION SITE UNTIL CONSTRUCTION IS COMPLETE.
- PRIOR TO BEGINNING THE WORK, THE CONTRACTOR SHALL OBTAIN ANY WRITTEN AGREEMENTS FOR INGRESS AND EGRESS TO THE WORK FORM ADJACENT PRIVATE PROPERTY OWNERS. ACCESS TO ANY ADJACENT PRIVATE PROPERTY SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS NOT OBTAINED BY THE OWNER OR OWNER'S REPRESENTATIVES AND PAY ALL FEES AS REQUIRED BY THE CONSTRUCTION COVERED IN THESE PLANS.
- EXCEPT FOR MATERIALS DESIGNED TO BE RELOCATED ON THIS PLAN, ALL OTHER CONSTRUCTION MATERIALS SHALL BE NEW.
- NO WORK SHALL BE BACKFILLED (INCLUDING BEDDING MATERIAL ABOVE THE SPRING LINE OF THE PIPE) UNTIL THE CONSTRUCTION HAS BEEN INSPECTED AND APPROVED FOR BACKFILLING BY THE APPROPRIATE GOVERNING AGENCY.
- ALL WORK AND MATERIALS WILL BE SUBJECT TO INSPECTION AND APPROVAL BY THE OWNER OR THE OWNERS REPRESENTATIVE.
- SHOP DRAWINGS AND MATERIAL SPECIFICATIONS SHALL BE SUBMITTED TO OWNER/ENGINEER FOR REVIEW AND APPROVAL PRIOR TO PLACEMENT OF MATERIAL.
- ALL WORK SHALL CONFORM TO ALL LOCAL, STATE, AND FEDERAL APPLICABLE LAWS AND REGULATIONS.
- ALL ESTIMATES OF QUANTITIES ARE FOR INFORMATIONAL PURPOSES ONLY. CONTRACTOR AND SUBCONTRACTORS SHALL BE RESPONSIBLE FOR DETERMINING ALL QUANTITIES. CONTRACTOR SHALL PROVIDE ALL WORK AND MATERIALS AS SHOWN ON THESE PLANS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR JOB SITE SAFETY OF HIS OWN PERSONNEL, ALL VISITORS TO THE SITE, AND THE GENERAL PUBLIC INCLUDING, BUT NOT LIMITED TO, TRENCH EXCAVATION AND SHORINGS, TRAFFIC CONTROL, AND SECURITY NOT LIMITED TO NORMAL WORKING HOURS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING ALL EXISTING FEATURES TO REMAIN THAT ARE DAMAGED DURING CONSTRUCTION ACTIVITIES TO EQUAL OR BETTER CONDITION, AT HIS OWN EXPENSE.
- CONTRACTOR SHALL COORDINATE THE INSTALLATION OF ALL SITE IMPROVEMENTS (INCLUDING BUT NOT LIMITED TO: UTILITIES, STRUCTURES, PAVING, LANDSCAPING, ETC.) SUCH THAT NO DAMAGE IS DONE TO SITE IMPROVEMENTS (I.E.: SAWCUTTING NEW PAVEMENT). SITE IMPROVEMENTS DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED OR REPLACED TO THE SATISFACTION OF THE OWNER AT NO ADDITIONAL COST TO THE OWNER.
- IF, DURING THE CONSTRUCTION PROCESS, CONDITIONS ARE ENCOUNTERED WHICH COULD INDICATE THAT A PRIOR UNIDENTIFIED SITUATION IS PRESENT, THE CONTRACTOR SHALL CONTACT THE ENGINEER IMMEDIATELY.
- THE CONTRACTOR SHALL REMOVE ALL DEBRIS RESULTING FROM WORK UNDER THIS CONTRACT TO AN APPROVED DUMP SITE.
- USE ONLY DIMENSIONS PROVIDED ON THESE PLANS. DO NOT SCALE DRAWINGS. INFORM ENGINEER OF ANY DISCREPANCIES AND/OR MISSING INFORMATION.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ACCESS TO ADJACENT PARCELS DURING ALL HOURS OF OPERATION FOR THE BUSINESSES LOCATED ON THOSE PARCELS.
- CONTRACTOR TO OBTAIN TEMPORARY POWER, TELEPHONE AND WATER FOR THE SITE AS NEEDED.
- CONTRACTOR MUST COORDINATE CONSTRUCTION WITH OWNER/ADJACENT PROPERTY OWNER'S CONSTRUCTION MANAGER.
- THE CONTRACTOR SHALL OBTAIN A COPY OF THE STANDARD SPECIFICATIONS AND DETAILS OF ALL AGENCIES EXERCISING JURISDICTION OVER THIS PROJECT. A COPY OF THESE SPECIFICATIONS AND DETAILS SHALL BE MAINTAINED ON THE JOBSITE AT ALL TIMES. A COPY OF ALL APPLICABLE STANDARD DETAILS AND SPECIFICATIONS ARE INCORPORATED HEREIN BY REFERENCE.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR KEEPING ADJACENT COUNTY ROADS FREE AND CLEAN OF ALL DEBRIS AND DIRT FROM THE JOB SITE.

GRADING

- THE CONTRACTOR IS RESPONSIBLE FOR PROTECTION OF ALL PROPERTY CORNERS. ANY PROPERTY CORNERS DISTURBED OR DAMAGED BY GRADING ACTIVITIES SHALL BE RESET BY A PROFESSIONAL LAND SURVEYOR LICENSED IN THE STATE OF COLORADO, AT THE CONTRACTOR'S EXPENSE.
- THE CONTOUR LINES SHOWN ARE TO FINISH GRADE FOR SURFACE OF ROADWAY, SURFACE OF POND, ETC. ALL SPOT ELEVATIONS SHOWN ARE TO FLOWLINE UNLESS OTHERWISE INDICATED.
- THE CONTRACTOR SHALL CLEAN OUT ALL EXISTING AND PROPOSED INLETS, PIPES AND MANHOLES OF DEBRIS AND SEDIMENT AT COMPLETION OF SITEWORK. THIS WORK SHALL BE DONE TO THE SATISFACTION OF THE OWNER.
- CONTRACTOR SHALL COORDINATE TESTING ACTIVITIES WITH THE GEOTECHNICAL ENGINEER.
- ALL GRADING, COMPACTION, AND PAVEMENT CONSTRUCTION WILL BE IN ACCORDANCE WITH RECOMMENDATIONS FROM THE GEOTECHNICAL INVESTIGATION.

GEOTECHNICAL STUDY NOTE

CONTRACTOR TO OBTAIN AND READ THE GEOTECHNICAL ENGINEERING STUDY (PROVIDED BY OWNER). IN CASE OF ANY CONFLICT WITH THESE PLANS AND SITEWORK SPECIFICATIONS REGARDING PAVING AND EARTHWORK, THE GEOTECHNICAL REPORT WILL GOVERN. ALL PAVING AND EARTHWORK SHALL CONFORM TO THE RECOMMENDATIONS OF THE REPORT.

DEWATERING PERMITS

- CONTRACTOR TO OBTAIN DEWATERING PERMIT FROM CDPHE PRIOR TO COMMENCING WORK. DISCHARGES SHALL BE MONITORED ACCORDING TO THE CONDITIONS OF THE CDPHE PERMIT.

| SHEET LIST TABLE | |
|------------------|---------------------------------|
| SHEET NUMBER | SHEET TITLE |
| 1 | COVER SHEET |
| 2 | LOCATION MAP |
| 3 | SITE PLAN |
| 4 | GRADING PLAN AND POND SECTIONS |
| 5 | ROADWAY PLAN AND PROFILE |
| 6 | PROPOSED SITE DETAILS |
| 7 | FENCE DETAILS |
| 8 | ANCHOR TRENCH AND LINER DETAILS |
| 9 | DRAINAGE SUMMARY |

EROSION & SEDIMENT CONTROL

- THIS PROJECT REQUIRES A PERMIT FOR STORMWATER DISCHARGE ASSOCIATED WITH CONSTRUCTION ACTIVITY FROM THE COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT. CONTRACTOR TO COMMENCE WORK ON THIS SITE ONLY AFTER AN ACTIVE PERMIT NUMBER HAS BEEN OBTAINED FROM THE COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT.
- THE CONTRACTOR SHALL INSTALL EROSION/SEDIMENTATION CONTROLS PRIOR TO ANY SITE PREPARATION WORK (E.G., CLEARING, GRUBBING, OR EXCAVATION).
- THE PLACEMENT OF EROSION/SEDIMENTATION CONTROLS SHALL BE IN ACCORDANCE WITH THE STORMWATER POLLUTION PREVENTION PLAN, TO BE PREPARED BY THE CONTRACTOR.
- CONTRACTOR TO ADJUST EROSION CONTROL MEASURES AS NEEDED FOR VARIOUS PHASES OF WORK.
- CONTRACTOR TO ENSURE THAT NO DIRT AND SEDIMENT IS TRACKED ONTO ADJACENT ROADWAYS AND WATERWAYS.
- A GROUNDWATER DISCHARGE PERMIT IS REQUIRED FROM THE STATE ENGINEER'S OFFICE, PRIOR TO PUMPING IT OUT.
- GROUNDWATER SHALL BE SAMPLED AND SENT TO AN APPROVED LABORATORY FOR TESTING PRIOR TO BEING DISCHARGED. TESTING SHALL BE IN ACCORDANCE WITH PERMIT FOR STORMWATER DISCHARGE.
- APPROVED EROSION AND SEDIMENT CONTROL "BEST MANAGEMENT PRACTICES" (BMPs) SHALL BE MAINTAINED AND KEPT IN GOOD REPAIR FOR THE DURATION OF THIS PROJECT. AT A MINIMUM, THE CONTRACTOR SHALL INSPECT ALL BMPs EVERY 14 DAYS, AND AFTER ALL SIGNIFICANT PRECIPITATION EVENTS I.E. RAINFALL, SNOWMELT. ALL NECESSARY MAINTENANCE AND REPAIR ACTIVITIES SHALL BE COMPLETED WITHIN TWENTY-FOUR (24) HOURS AFTER DIRECTION BY THE INSPECTOR. ACCUMULATED SEDIMENT AND CONSTRUCTION DEBRIS SHALL BE REMOVED WEEKLY FROM ALL BMPs, OR AT ANY TIME THAT SEDIMENT OR CONSTRUCTION DEBRIS ADVERSELY IMPACTS THE FUNCTIONING OF THE BMPs.
- TOPSOIL SHALL BE STOCKPILED WITHIN LIMITS OF CONSTRUCTION FOR USE ON AREAS TO BE RE-VEGETATED. ANY AND ALL STOCKPILES SHALL BE PLACED IN AN APPROVED LOCATION AND PROTECTED FROM EROSION ELEMENTS USING MEASURES SPECIFIED IN THE EROSION CONTROL PLAN.
- SOILS THAT WILL BE STOCKPILED FOR MORE THAN THIRTY (30) DAYS SHALL BE MULCHED AND SEEDED WITH A TEMPORARY OR PERMANENT GRASS COVER WITHIN FOURTEEN (14) DAYS OF STOCKPILE CONSTRUCTION.
- ANY SETTLEMENT OR SOIL ACCUMULATIONS BEYOND THE LIMITS OF CONSTRUCTION DUE TO GRADING OR EROSION SHALL BE REPAIRED IMMEDIATELY BY THE CONTRACTOR. THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR REMEDIATION OF ANY ADVERSE IMPACTS TO ADJACENT WATERWAYS, WETLANDS, PROPERTIES, ETC. RESULTING FROM WORK DONE AS PART OF THIS PROJECT.
- A WATER SOURCE MUST BE AVAILABLE ON SITE DURING EARTHWORK OPERATIONS AND UTILIZED AS REQUIRED TO MINIMIZE DUST FROM EARTHWORK EQUIPMENT AND WIND.
- THE CONTRACTOR MUST KEEP ALL POLLUTANTS, INCLUDING SEDIMENT, CONSTRUCTION DEBRIS, AND TRENCH BACKFILL MATERIALS FROM ENTERING THE STORM SEWER SYSTEM.
- ALL SPILLS INCLUDING, BUT NOT LIMITED TO, PETROLEUM PRODUCTS, SOLVENTS, AND CEMENT SHALL BE CLEANED UP IMMEDIATELY. MESA COUNTY ENGINEERING DIVISION SHALL BE NOTIFIED IMMEDIATELY.
- THE CONTRACTOR SHALL ENSURE THAT ALL LOADS OF CUT AND FILL MATERIAL IMPORTED TO OR EXPORTED FROM THE SITE SHALL BE PROPERLY COVERED TO PREVENT LOSS OF THE MATERIAL DURING TRANSPORT ON PUBLIC RIGHT-OF-WAY.
- THE CONTRACTOR SHALL ENSURE THAT ALL MATERIAL EXPORTED FROM THE SITE, IS DISPOSED OF AT A SITE PERMITTED TO ACCEPT SUCH MATERIAL.
- THE USE OF REBAR, STEEL STAKES OR STEEL FENCE POSTS FOR STAKING DOWN STRAW OR HAY BALES, OR TO SUPPORT SILT FENCING USED AS AN EROSION CONTROL MEASURE, IS PROHIBITED.
- THE CLEANING OF CONCRETE DELIVERY TRUCK CHUTES IS RESTRICTED TO APPROVED LOCATIONS ON THE JOB SITE. THE DISCHARGE OF WATER CONTAINING WASTE CEMENT TO THE STORM SEWER SYSTEM IS PROHIBITED. ALL CONCRETE WASTE SHALL BE PROPERLY CLEANED UP AND DISPOSED OF AT AN APPROPRIATE LOCATION.
- PRIOR TO ACTUAL CONSTRUCTION, THE CONTRACTOR SHALL VERIFY THE LOCATION OF EXISTING UTILITIES. FOR INFORMATION, CONTACT THE UTILITY NOTIFICATION CENTER OF COLORADO AT 811.
- CONTRACTOR TO FILE "NOTICE OF TERMINATION" WITH CDPHE ONCE PROJECT IS COMPLETE AND ALL DISTURBED AREAS HAVE BEEN STABILIZED INCLUDING TEMPORARY BMPs REMOVED.

OLSSON ASSOCIATES
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Know what's below. Call before you dig.
 CALL 811 SEVENTY-TWO HOURS PRIOR TO DIGGING, GRADING OR EXCAVATING FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES.

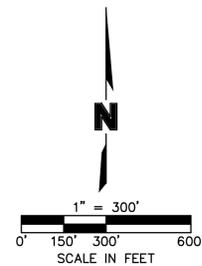
| REV. NO. | DATE | REVISIONS DESCRIPTION |
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| 1 | 10/31/13 | AS-CONSTRUCTED |

COVER SHEET
 596-32C WATER IMPOUNDMENT RETROFIT
 MARATHON OIL COMPANY
 GARFIELD COUNTY, COLORADO
 2013

drawn by: MEO
 checked by: WEP
 approved by: WEP
 QA/QC by: WEP
 project no.: 012-1372
 drawing no.: 01_121372_TTL.dwg
 date: 08.30.2013

NOTES:

1. WATER IMPOUNDMENT PONDS A AND C ARE CURRENTLY PENDING COGCC F28 APPROVAL.
2. ONLY WATER IMPOUNDMENT POND 32C IS WITHIN THE SCOPE OF THIS F28 APPLICATION.

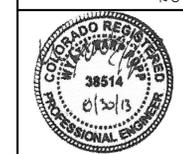


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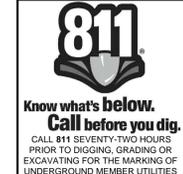
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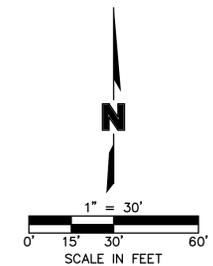
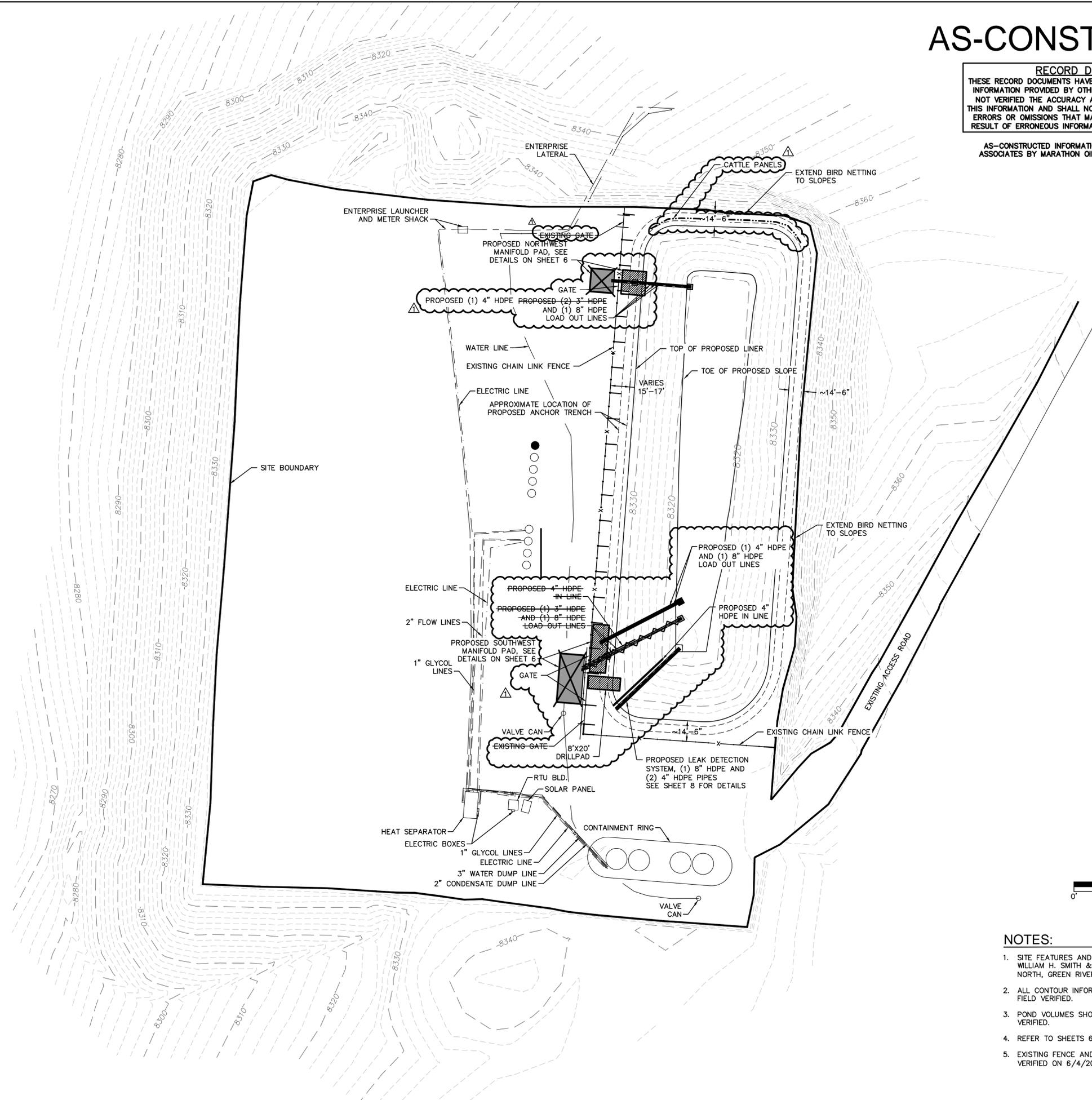
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| LOCATION MAP | 2013 |
| 596-32C WATER IMPOUNDMENT RETROFIT MARATHON OIL COMPANY | |
| GARFIELD COUNTY, COLORADO | |

| | |
|--------------|--------------------|
| drawn by: | MEO |
| checked by: | WEP |
| approved by: | WEP |
| QA/QC by: | WEP |
| project no.: | 012-1372 |
| drawing no.: | 02-121372_LMAP.dwg |
| date: | 08.30.2013 |

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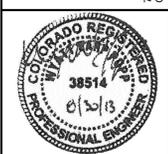
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- NOTES:**
1. SITE FEATURES AND TOPOGRAPHY WAS PROVIDED BY WILLIAM H. SMITH & ASSOCIATES P.C. 550 EAST SECOND NORTH, GREEN RIVER, WY, (307) 875-3638.
 2. ALL CONTOUR INFORMATION USED FOR DESIGN SHALL BE FIELD VERIFIED.
 3. POND VOLUMES SHOWN ON PLANS SHALL BE FIELD VERIFIED.
 4. REFER TO SHEETS 6, 7, AND 8 FOR SITE DETAILS.
 5. EXISTING FENCE AND GATE LOCATIONS WERE FIELD VERIFIED ON 6/4/2013.

DWG: F:\Projects\012-1372\WTRSI Retrofits\as-built\03-121372_SIT.dwg USER: dfox
 DATE: Nov 06, 2013 12:59pm XREFS: 121372_XBASE 121372_IB_

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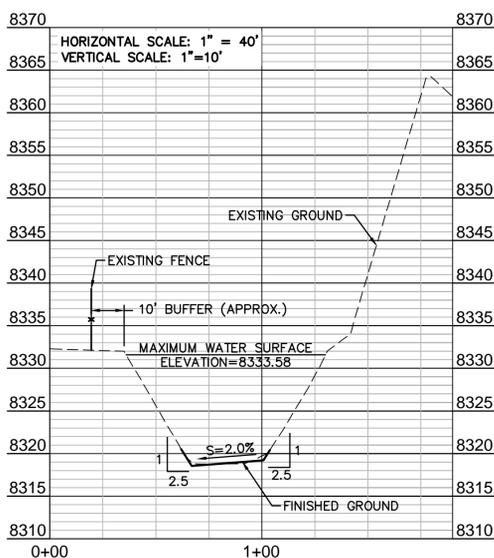
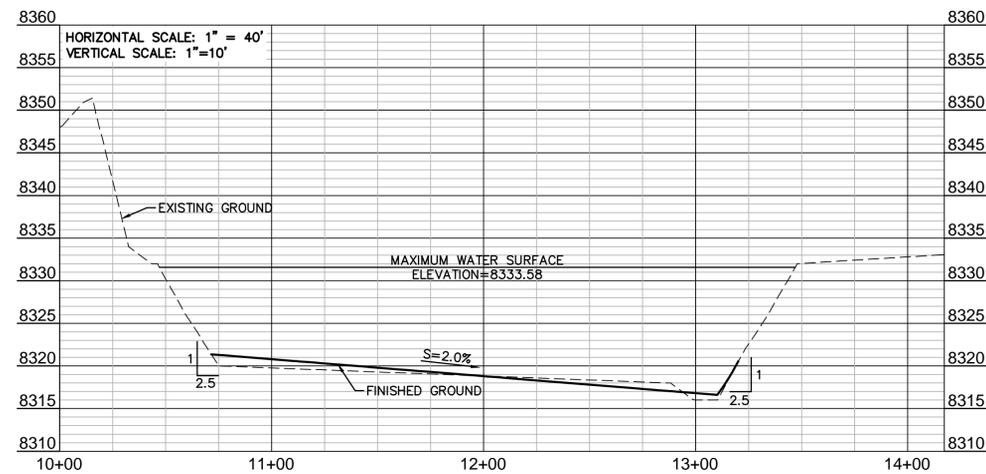
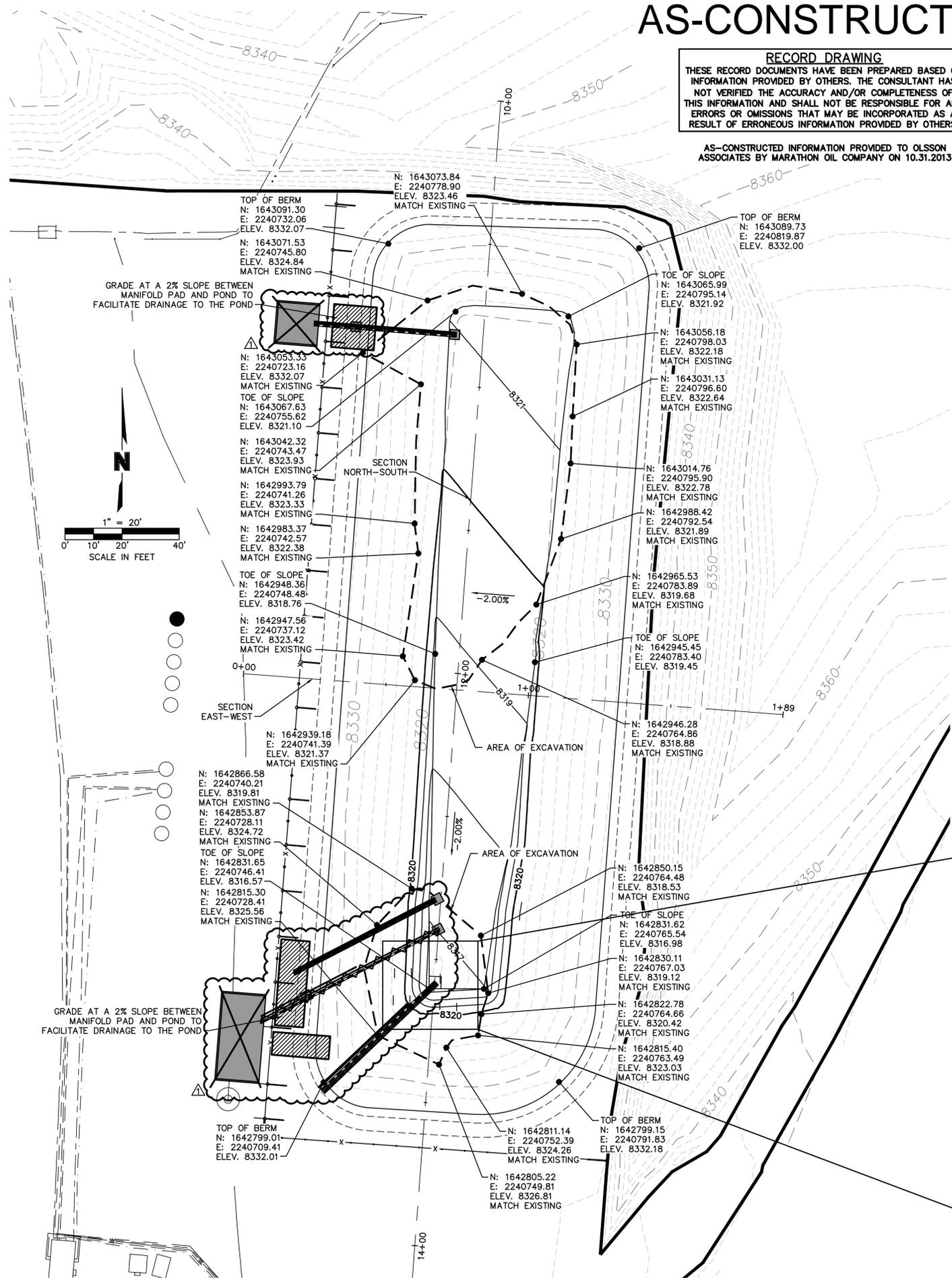
SITE PLAN
 596-32C WATER IMPOUNDMENT RETROFIT
 MARATHON OIL COMPANY
 GARFIELD COUNTY, COLORADO

drawn by: MEQ
 checked by: WEP
 approved by: WEP
 QA/QC by: WEP
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AS-BUILT WATER IMPOUNDMENT POND STAGE-STORAGE

| ELEVATION | VOLUME (CF) | VOLUME (BBL) | VOLUME (AF) |
|-----------|-------------|--------------|-------------|
| 8318 | 89 | 16 | 0.00 |
| 8320 | 10954 | 1951 | 0.25 |
| 8322 | 31544 | 5618 | 0.72 |
| 8324 | 57910 | 10314 | 1.33 |
| 8326 | 90340 | 16090 | 2.07 |
| 8328 | 128987 | 22973 | 2.96 |
| 8330 | 173533 | 30908 | 3.98 |
| 8331.5 | 210934 | 37569 | 4.84 |
| 8332 | 224186 | 39929 | 5.15 |
| 8333 | 251876 | 44861 | 5.78 |

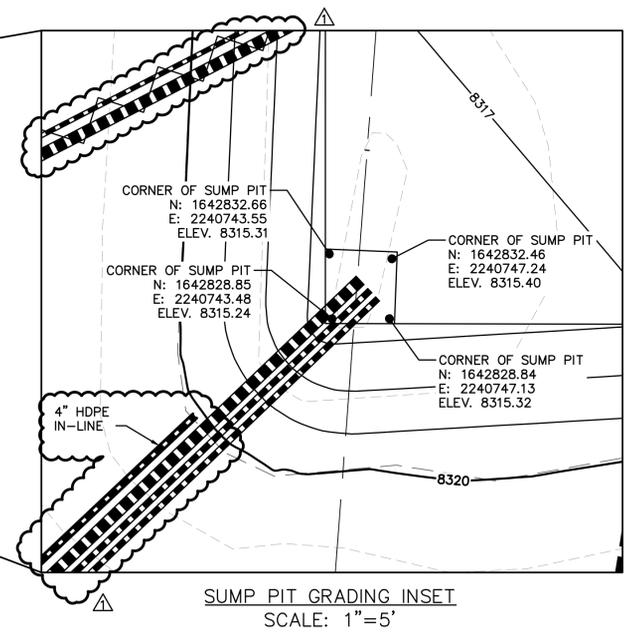
*NOTE: MAXIMUM WATER SURFACE ELEVATION PROVIDING 2' OF FREEBOARD

- NOTES:
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 - ALL CONTOUR INFORMATION USED FOR DESIGN SHALL BE FIELD VERIFIED.
 - POND VOLUMES SHOWN ON PLANS SHALL BE FIELD VERIFIED.
 - CONTRACTOR TO MAINTAIN 2% SLOPE FROM MANIFOLD PADS TO POND.
 - REFER TO SHEETS 6, 7, AND 8 FOR SITE DETAILS.

EXISTING WATER IMPOUNDMENT POND STAGE-STORAGE

| ELEVATION | VOLUME (CF) | VOLUME (BBL) | VOLUME (AF) |
|-----------|-------------|--------------|-------------|
| 8315.88 | 0 | 0 | 0 |
| 8316.00 | 5 | 1 | 0.00 |
| 8318.00 | 425 | 76 | 0.01 |
| 8320.00 | 10,045 | 1,789 | 0.23 |
| 8322.00 | 31,241 | 5,564 | 0.72 |
| 8324.00 | 58,081 | 10,345 | 1.33 |
| 8326.00 | 90,805 | 16,173 | 2.08 |
| 8328.00 | 129,697 | 23,100 | 2.98 |
| 8330.00 | 175,005 | 31,170 | 4.02 |
| 8331.58 | 215,393 | 38,363 | 4.94 |
| 8332.00 | 226,816 | 40,398 | 5.21 |
| 8333.58 | 272,380 | 48,513 | 6.25 |

*NOTE: MAXIMUM WATER SURFACE ELEVATION PROVIDING 2' OF FREEBOARD



PROPOSED WATER IMPOUNDMENT POND STAGE-STORAGE

| ELEVATION | VOLUME (CF) | VOLUME (BBL) | VOLUME (AF) |
|-----------|-------------|--------------|-------------|
| 8315.24 | 0 | 0 | 0 |
| 8316.00 | 6 | 1 | 0.00 |
| 8318.00 | 1,758 | 313 | 0.04 |
| 8320.00 | 9,960 | 1,772 | 0.23 |
| 8322.00 | 28,375 | 5,054 | 0.65 |
| 8324.00 | 55,216 | 9,834 | 1.27 |
| 8326.00 | 87,939 | 15,663 | 2.02 |
| 8328.00 | 126,831 | 22,590 | 2.91 |
| 8330.00 | 172,139 | 30,658 | 3.95 |
| 8331.58 | 212,527 | 37,853 | 4.88 |
| 8332.00 | 223,950 | 39,887 | 5.14 |
| 8333.58 | 269,515 | 48,003 | 6.19 |

*NOTE: MAXIMUM WATER SURFACE ELEVATION PROVIDING 2' OF FREEBOARD

USER: dfev
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 www.olsonassociates.com

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Know what's below.
 Call before you dig.
 CALL 811 SEVENTY-TWO HOURS PRIOR TO DIGGING, GRADING OR EXCAVATING FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES.

| REV. NO. | DATE | REVISIONS DESCRIPTION |
|----------|----------|-----------------------|
| 1 | 10/31/13 | AS-CONSTRUCTED |

REVISIONS

GRADING PLAN AND POND SECTIONS

596-32C WATER IMPOUNDMENT RETROFIT
 MARATHON OIL COMPANY

GARFIELD COUNTY, COLORADO

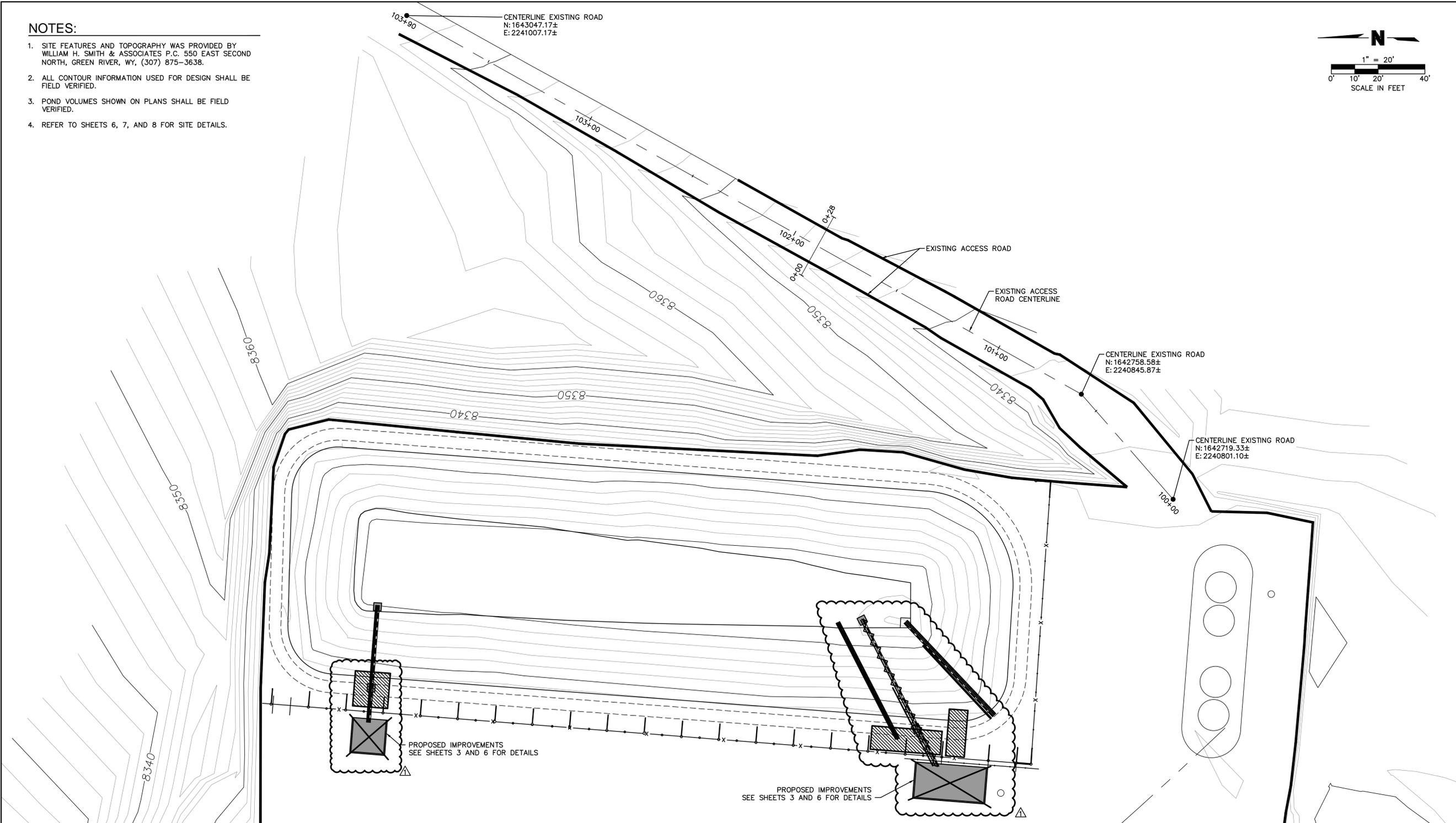
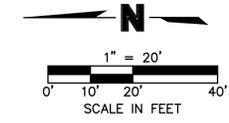
2013

drawn by: MEQ
 checked by: WEP
 approved by: WEP
 QA/QC by: WEP
 project no.: 012-1372
 drawing no.: 04_121372_PDFSEC.dwg
 date: 08.30.2013

SHEET
4 of 9

NOTES:

1. SITE FEATURES AND TOPOGRAPHY WAS PROVIDED BY WILLIAM H. SMITH & ASSOCIATES P.C. 550 EAST SECOND NORTH, GREEN RIVER, WY, (307) 875-3638.
2. ALL CONTOUR INFORMATION USED FOR DESIGN SHALL BE FIELD VERIFIED.
3. POND VOLUMES SHOWN ON PLANS SHALL BE FIELD VERIFIED.
4. REFER TO SHEETS 6, 7, AND 8 FOR SITE DETAILS.



CENTERLINE EXISTING ROAD
N: 1643047.17±
E: 2241007.17±

CENTERLINE EXISTING ROAD
N: 1642758.58±
E: 2240845.87±

CENTERLINE EXISTING ROAD
N: 1642719.33±
E: 2240801.10±

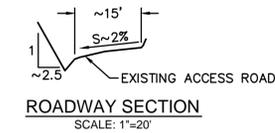
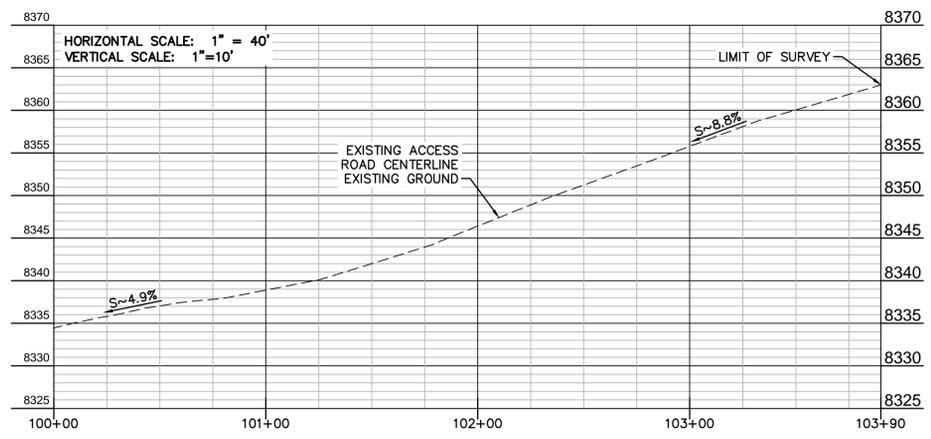
PROPOSED IMPROVEMENTS
SEE SHEETS 3 AND 6 FOR DETAILS

PROPOSED IMPROVEMENTS
SEE SHEETS 3 AND 6 FOR DETAILS

AS-CONSTRUCTED

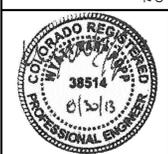
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AS-CONSTRUCTED INFORMATION PROVIDED TO OLSSON ASSOCIATES BY MARATHON OIL COMPANY ON 10.31.2013



DWG: F:\Projects\012-1372\WTRSPetroff\as-built\05_121372_RDP&P.dwg
 DATE: Nov 06, 2013 1:00pm
 USER: dfox
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 XREFS: 121372_XBASE 121372_PBASE

OLSSON ASSOCIATES
760 Horizon Drive, Suite 102
Grand Junction, CO 81506
TEL 970.263.7800
FAX 970.263.7456
www.olsonconsulting.com



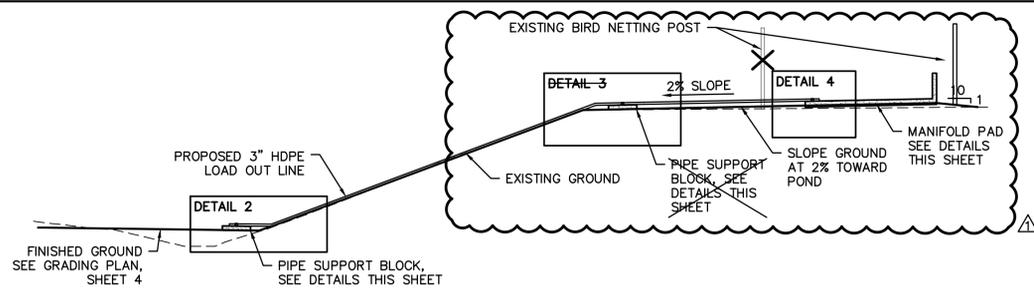
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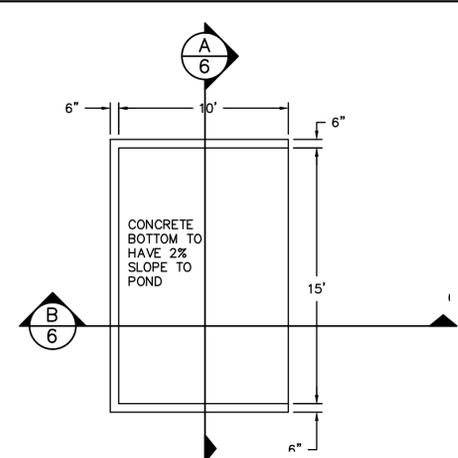
| REV. NO. | DATE | REVISIONS DESCRIPTION |
|----------|----------|-----------------------|
| 1 | 10/31/13 | AS-CONSTRUCTED |

ROADWAY PLAN AND PROFILE
596-32C WATER IMPOUNDMENT RETROFIT
MARATHON OIL COMPANY
GARFIELD COUNTY, COLORADO
2013

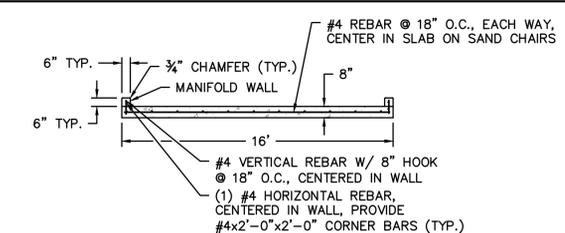
drawn by: MEQ
checked by: WEP
approved by: WEP
QA/QC by: WEP
project no.: 012-1372
drawing no.: 05_121372_RDP&P.dwg
date: 08.30.2013



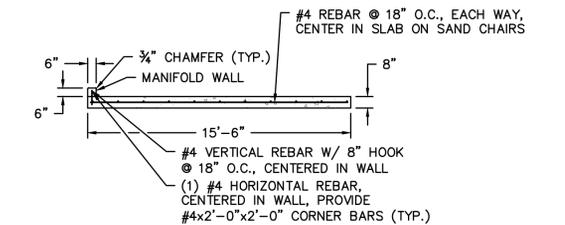
1
6 TYPICAL 3" LOAD OUT PIPE PROFILE
Scale: 1"=10'



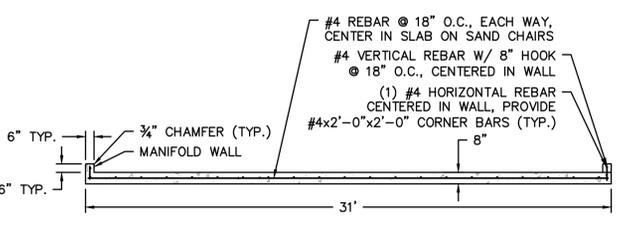
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6 NORTHWEST MANIFOLD PAD
Scale: 1"=5'



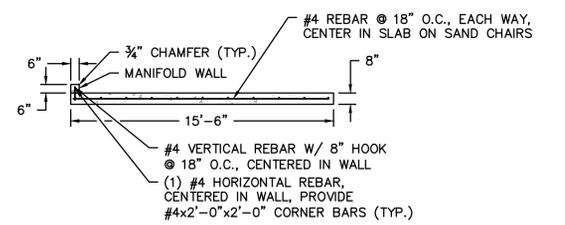
A
6 MANIFOLD PAD SECTION
Scale: 1"=5'



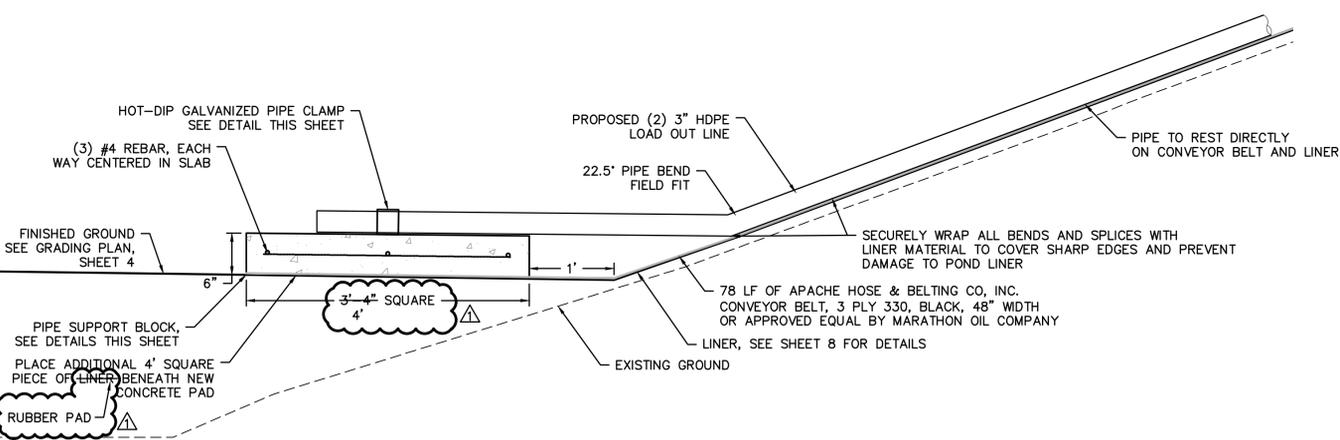
B
6 MANIFOLD PAD SECTION
Scale: 1"=5'



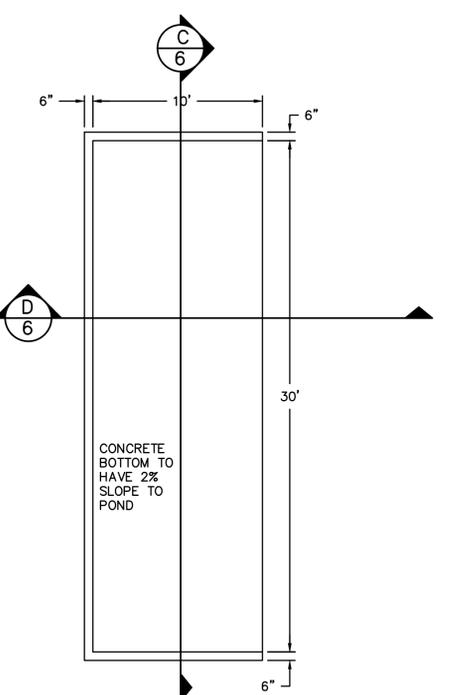
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6 MANIFOLD PAD SECTION
Scale: 1"=5'



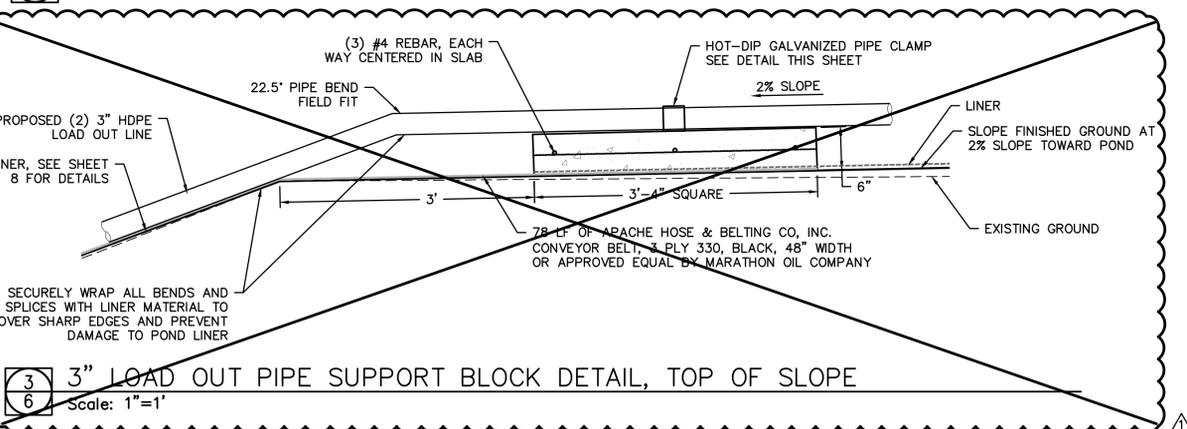
D
6 MANIFOLD PAD SECTION
Scale: 1"=5'



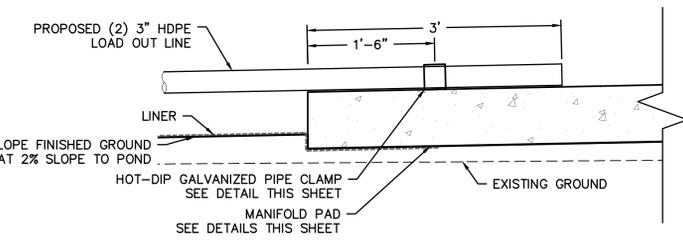
2
6 3" LOAD OUT PIPE SUPPORT BLOCK DETAIL, BOTTOM OF SLOPE
Scale: 1"=1'



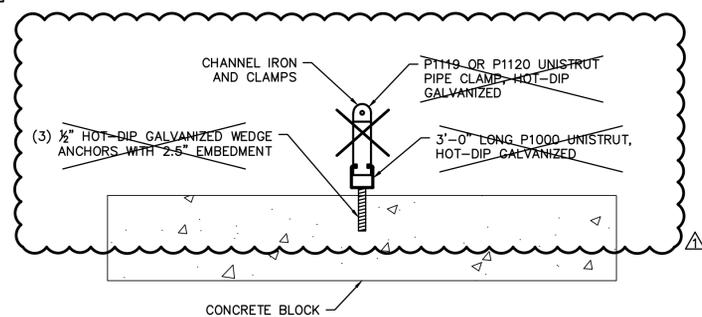
6
6 SOUTHWEST MANIFOLD PAD
Scale: 1"=5'



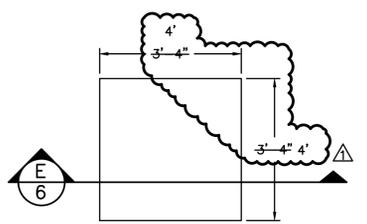
3
6 3" LOAD OUT PIPE SUPPORT BLOCK DETAIL, TOP OF SLOPE
Scale: 1"=1'



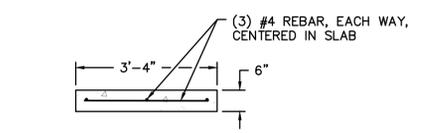
4
6 3" LOAD OUT PIPE ATTACHMENT TO MANIFOLD PAD
Scale: 1"=1'



7
6 PIPE CLAMP DETAIL
Scale: 1"=0.5'



8
6 PIPE BLOCK DETAIL
Scale: 1"=2'



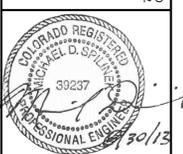
E
6 PIPE BLOCK SECTION
Scale: 1"=2'

- NOTES:
- REMOVE EXISTING SPRAY SYSTEM AND RESET AFTER NEW LINER INSTALLATION. PLACE PUMP ON PROPOSED MANIFOLD PAD AT SOUTHWEST CORNER OF POND. DESIGN OF SPRAY SYSTEM IS BY OTHERS.
 - WRAP IN AND OUT LINES (3" AND 4" HDPE PIPES) IN INSULATION TO PREVENT FREEZING.
 - EXTEND BIRD NETTING TO SLOPES ON THE NORTH AND EAST SIDES OF THE POND.
 - FACILITY TO BE SECURED BY INSTALLING LOCKS ON THE GATES.
 - INSTALL NEW LINING SYSTEM. SEE SHEET 8 FOR DETAILS.
 - ALL CONCRETE SHALL BE SAND & GRAVEL MIX WITH 3,000 PSI STRENGTH AT 28 DAYS.
 - ALL REINFORCEMENT STEEL SHALL BE ASTM A615, GRADE 60, EPOXY COATED.
 - MECHANICAL CONNECTIONS WITHIN MANIFOLD PAD TO BE DESIGNED BY OTHERS.

AS-CONSTRUCTED

RECORD DRAWING
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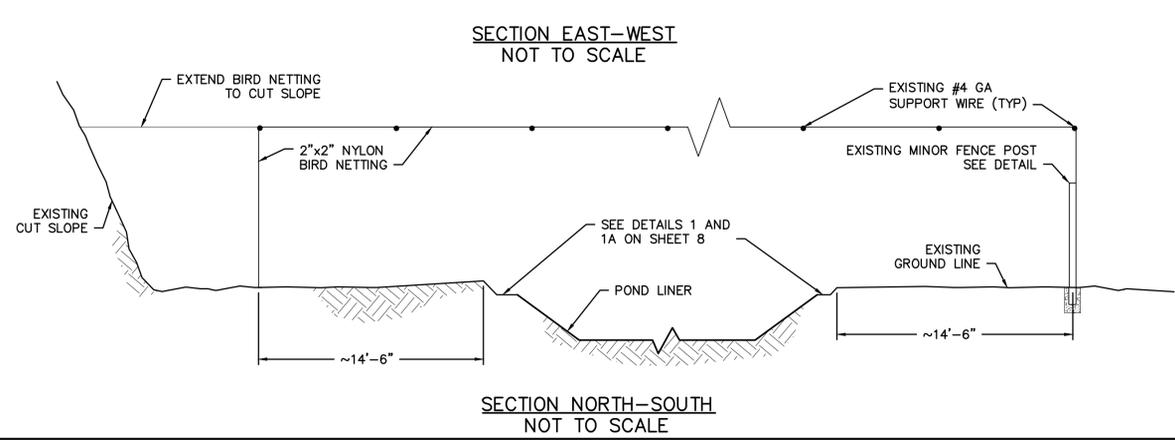
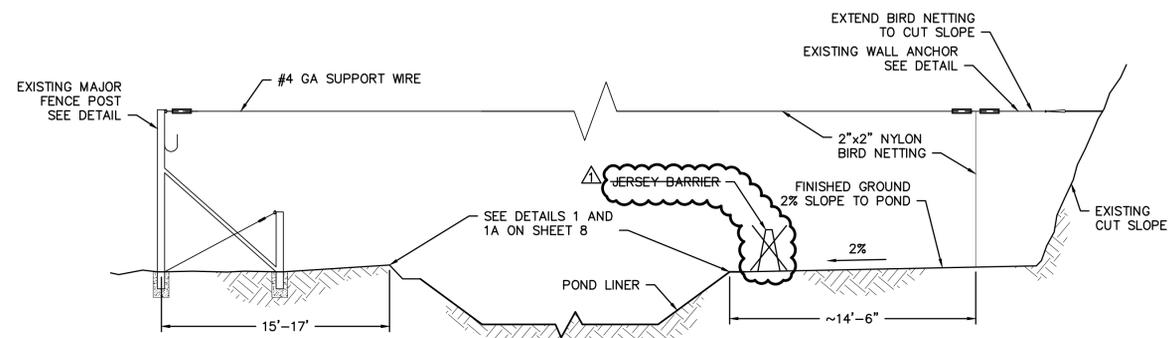
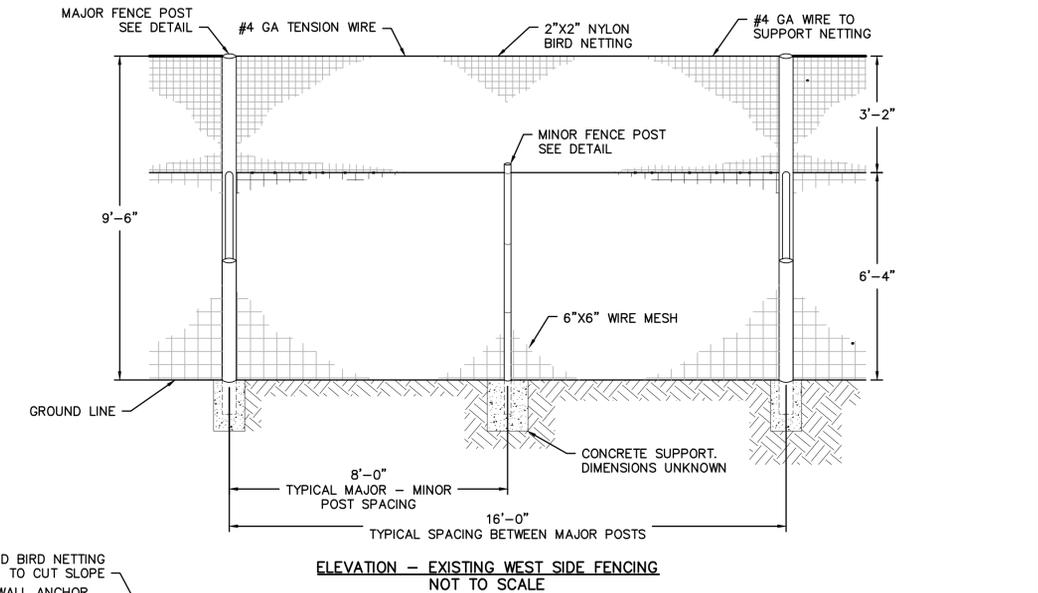
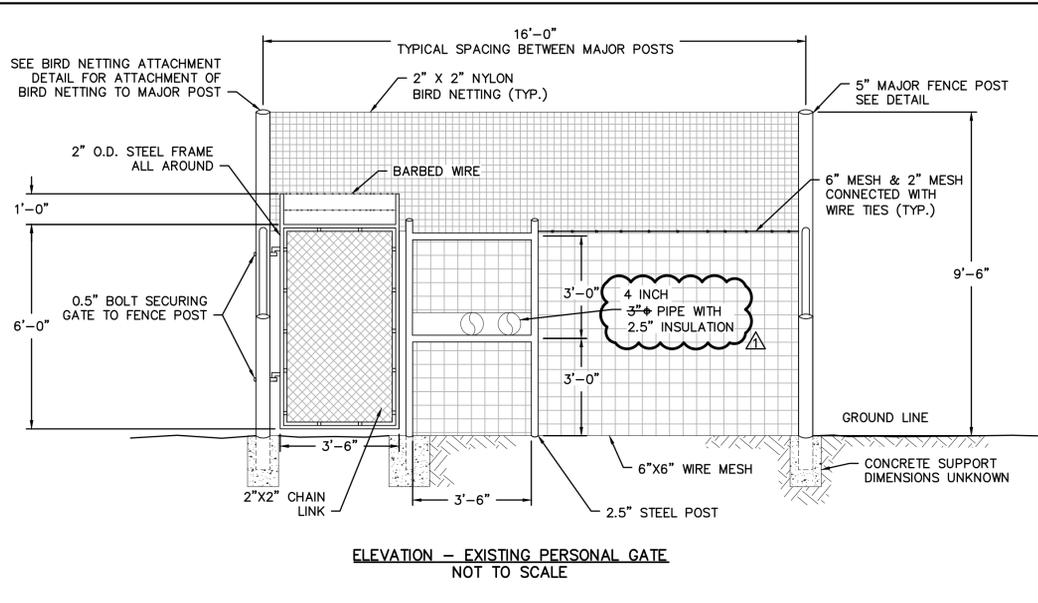
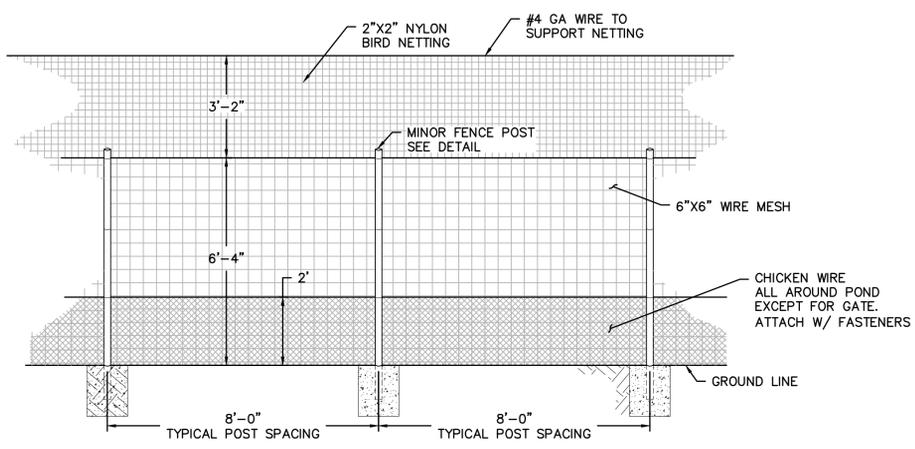
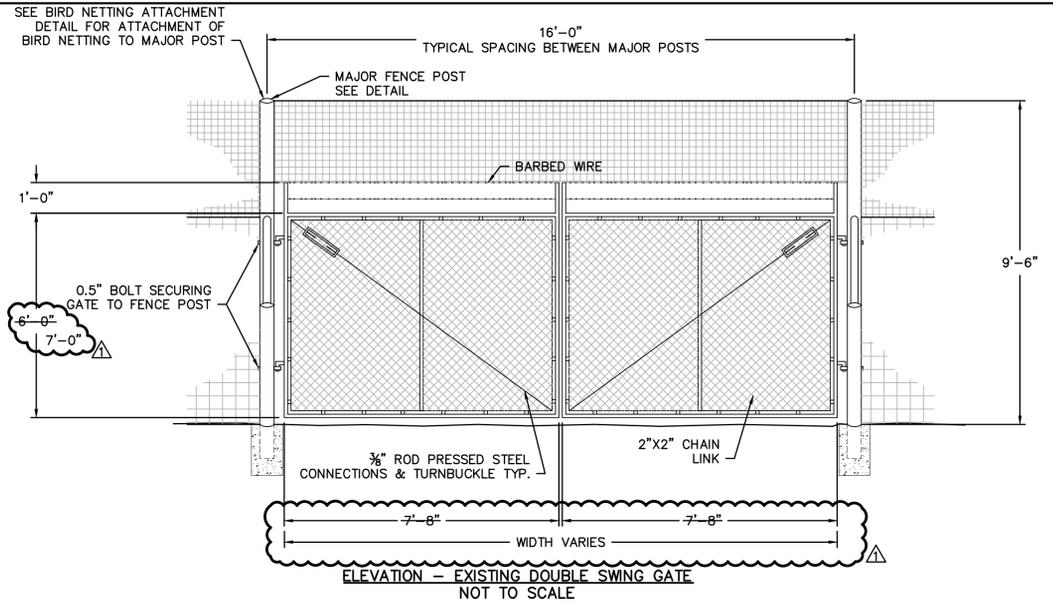
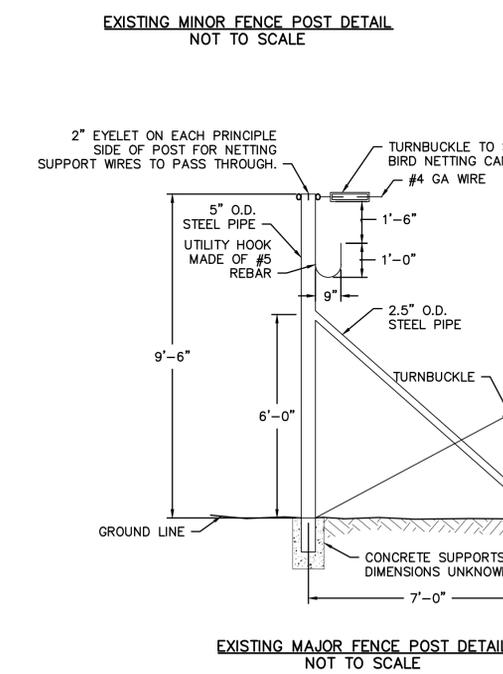
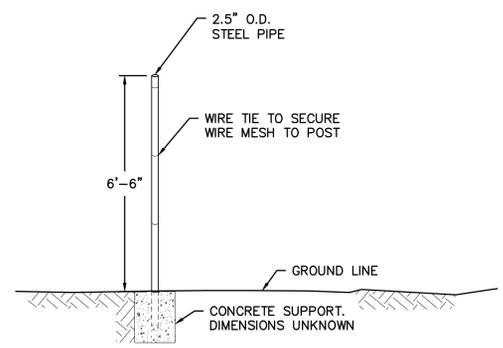
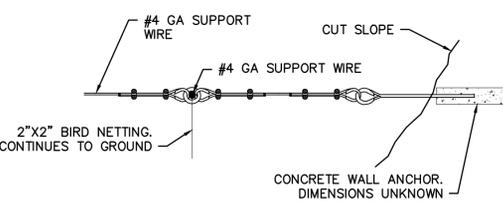
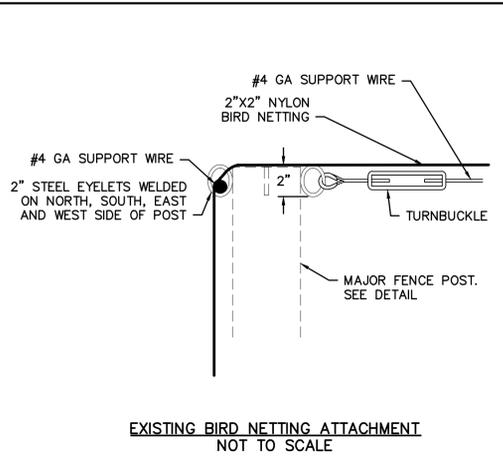
| REV. NO. | DATE | REVISIONS DESCRIPTION |
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| 1 | 10.31.13 | AS-CONSTRUCTED |

PROPOSED SITE DETAILS
596-32C WATER IMPOUNDMENT RETROFIT
MARATHON OIL COMPANY
GARFIELD COUNTY, COLORADO
2013

drawn by: MEQ
checked by: WEP
approved by: WEP
QA/QC by: WEP
project no.: 012-1372
drawing no.: 07_121372_DTL_002
date: 08.30.2013

USER: dfox
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 DATE: Nov 06, 2013 1:00pm
 USER: dfox
 XREFS: 121372_TB_



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OLSSON ASSOCIATES
 760 Horizon Drive, Suite 102
 Grand Junction, CO 81506
 TEL 970.263.7890
 FAX 970.263.7456
 www.olsosn.com



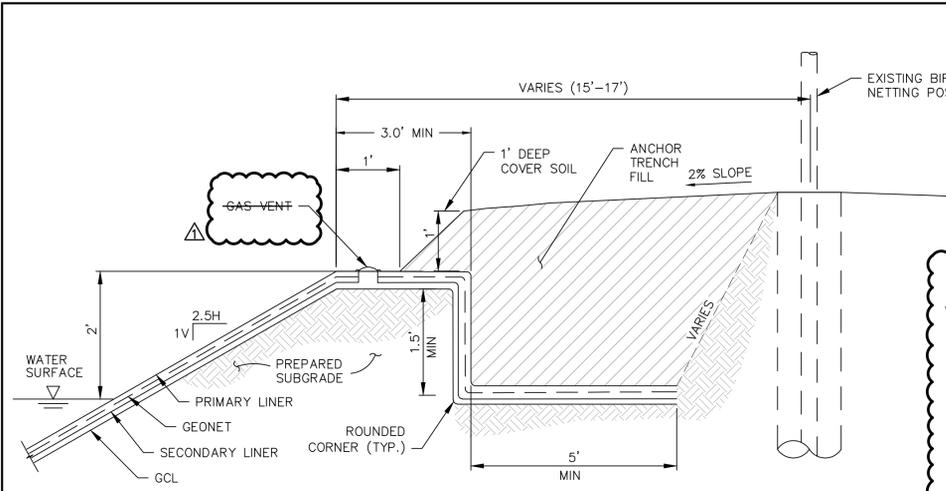
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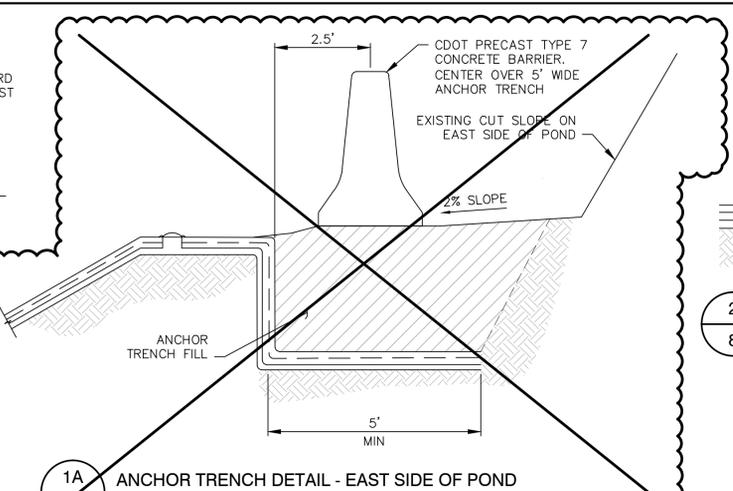
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FENCE DETAILS
 596-32C WATER IMPOUNDMENT RETROFIT
 MARATHON OIL COMPANY
 GARFIELD COUNTY, COLORADO
 2013
 SHEET 7 of 9

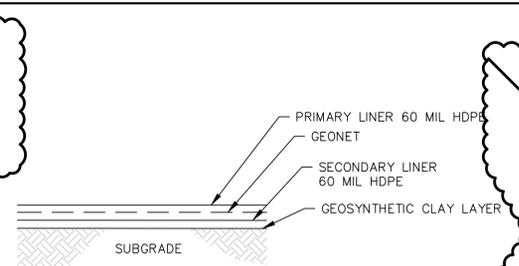
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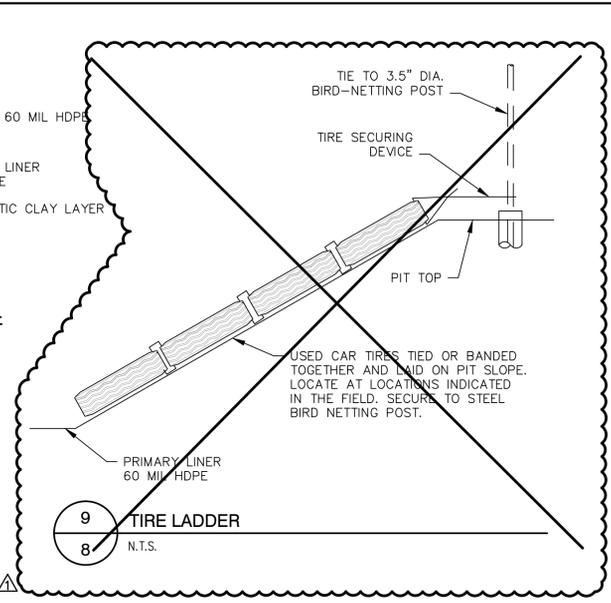
1 ANCHOR TRENCH DETAIL
8 N.T.S.



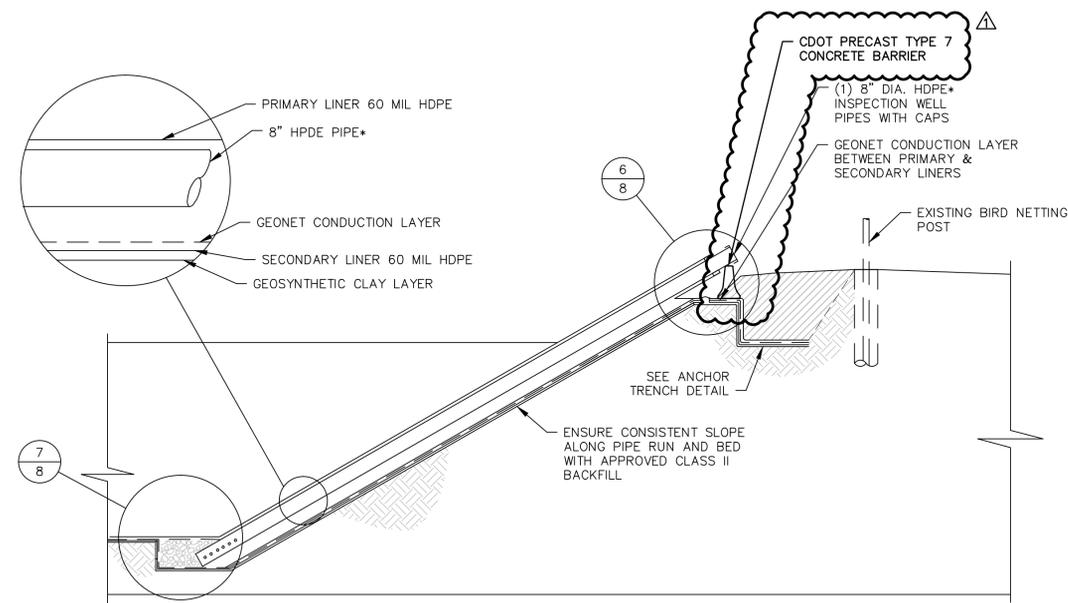
1A ANCHOR TRENCH DETAIL - EAST SIDE OF POND
8 N.T.S.



2 TYPICAL POND LINING SYSTEM DETAIL
8 N.T.S.

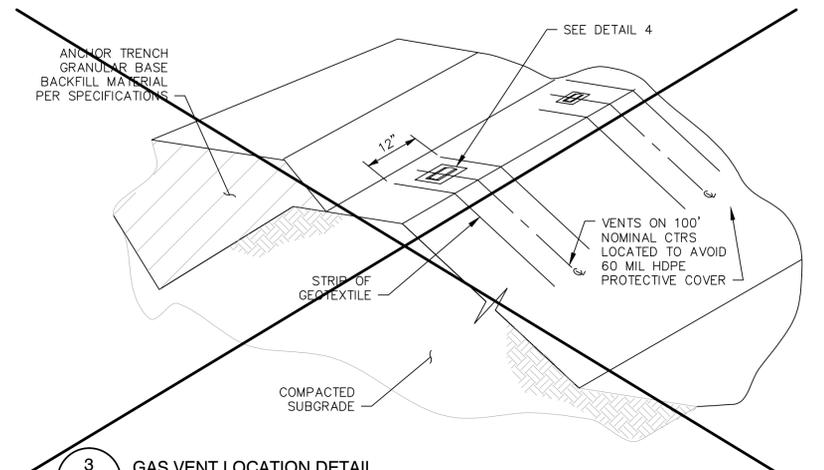


9 TIRE LADDER
8 N.T.S.

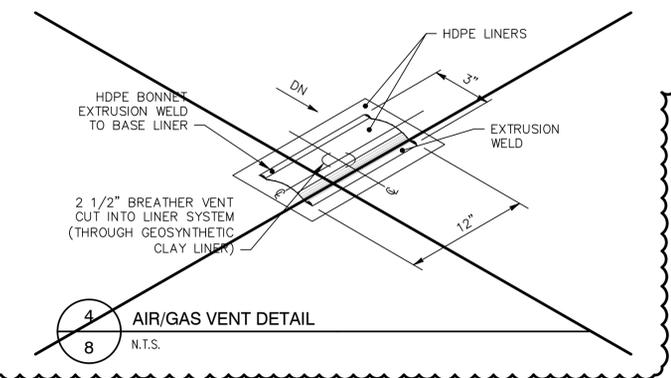


5 LEAK DETECTION WELL DETAIL WITH PIPE RESTING ON SLOPE GRADE
8 N.T.S.

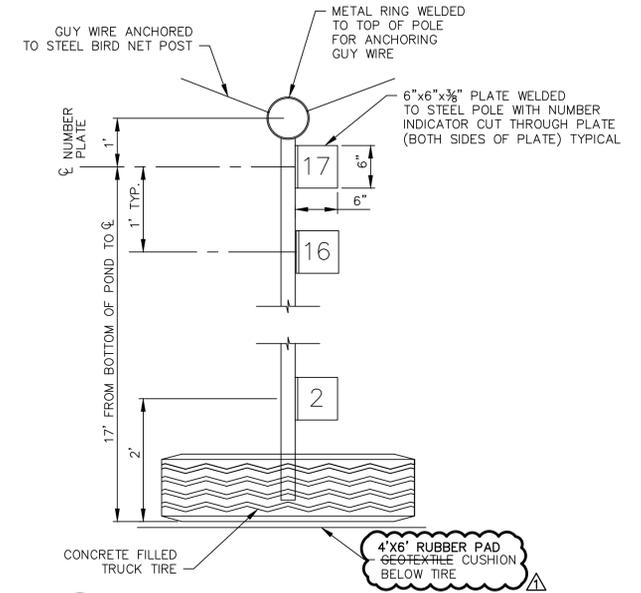
NOTE: PIT BOTTOM TO BE SLOPED TOWARDS SUMP PIT. SEE GRADING PLAN FOR ELEVATIONS.
*ALSO (2) 4" HDPE PIPES



3 GAS VENT LOCATION DETAIL
8 N.T.S.



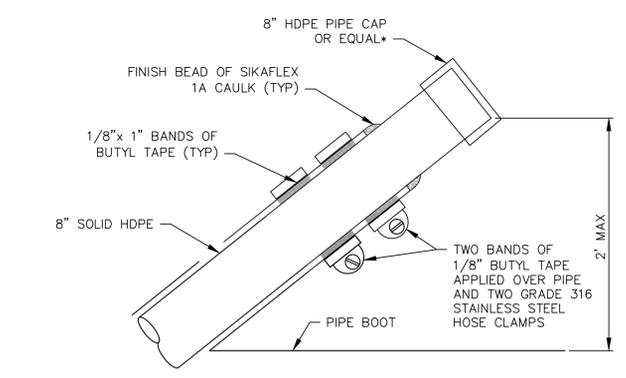
4 AIR/GAS VENT DETAIL
8 N.T.S.



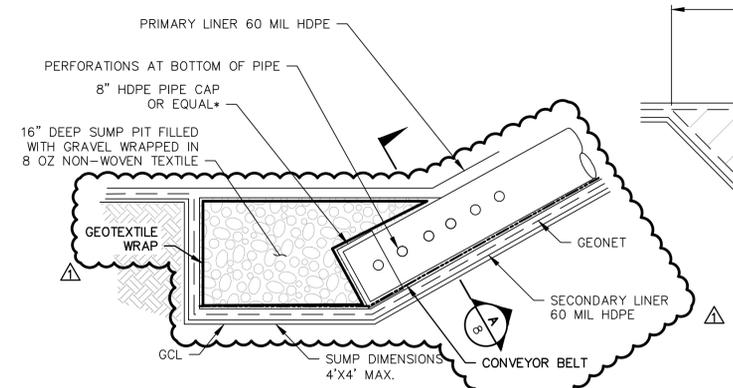
8 STAFF GAGE DETAIL
8 N.T.S.

GENERAL NOTES:

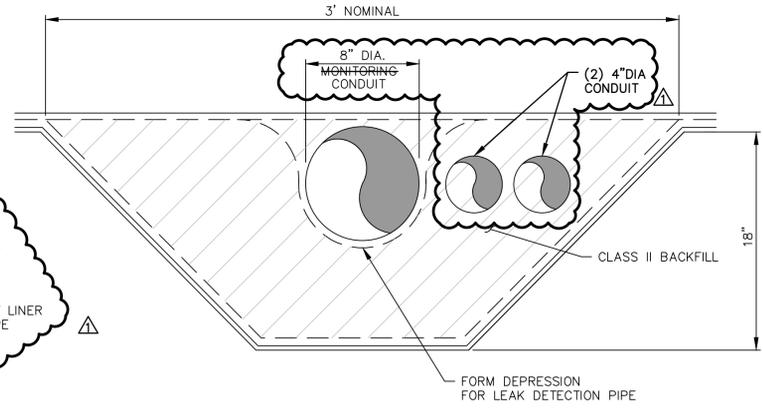
- EXISTING LINER SHALL BE FIELD VERIFIED AND REMOVED. THESE DETAILS SHALL BE USED FOR NEW LINER INSTALLATION.
- CONTACT THE ENGINEER IF FIELD CONDITIONS ARE DIFFERENT THAN THOSE ASSUMED IN THE DESIGN AND DESIGNED ANCHOR TRENCH DIMENSIONS AND/OR COVER SOIL DEPTH CANNOT BE ACHIEVED.
- SINCE SITE-SPECIFIC DATA WAS NOT AVAILABLE, THE VALUE FOR THE FRICTION ANGLES BETWEEN GEOMEMBRANES AND SOIL/GEOMEMBRANE HAS BEEN ESTIMATED FROM LITERATURE GUIDANCE FROM WASTE CONTAINMENT SYSTEMS, WASTE STABILIZATION, AND LANDFILLS. SHARMA/LEWIS 1994 AND A STUDY DONE BY MARTIN ET. AL. [MARTIN, J.P., KOERNER R.M., AND WHITEY, J.E., "EXPERIMENTAL FRICTION EVALUATION OF SLIPPAGE BETWEEN GEOMEMBRANES, GEOTEXTILES AND SOILS," PROCEEDINGS OF THE INTERNATIONAL CONFERENCE ON GEOMEMBRANES, IFAI, 1984, PP. 191-196]. CONSERVATIVE VALUES FROM THE RANGES PROVIDED IN THE AFORE MENTIONED LITERATURE WAS USED DETERMINING ANCHOR TRENCH DIMENSIONS AND RUN OUT LENGTH.



6 PIPE BOOT SEALING DETAIL
8 N.T.S. *ALSO (2) 4" HDPE PIPE CAPS OR EQUAL



7 SUMP PIT FILLED WITH GRAVEL
8 N.T.S. *ALSO (2) 4" HDPE PIPE CAPS OR EQUAL



A SECTION
8 N.T.S.

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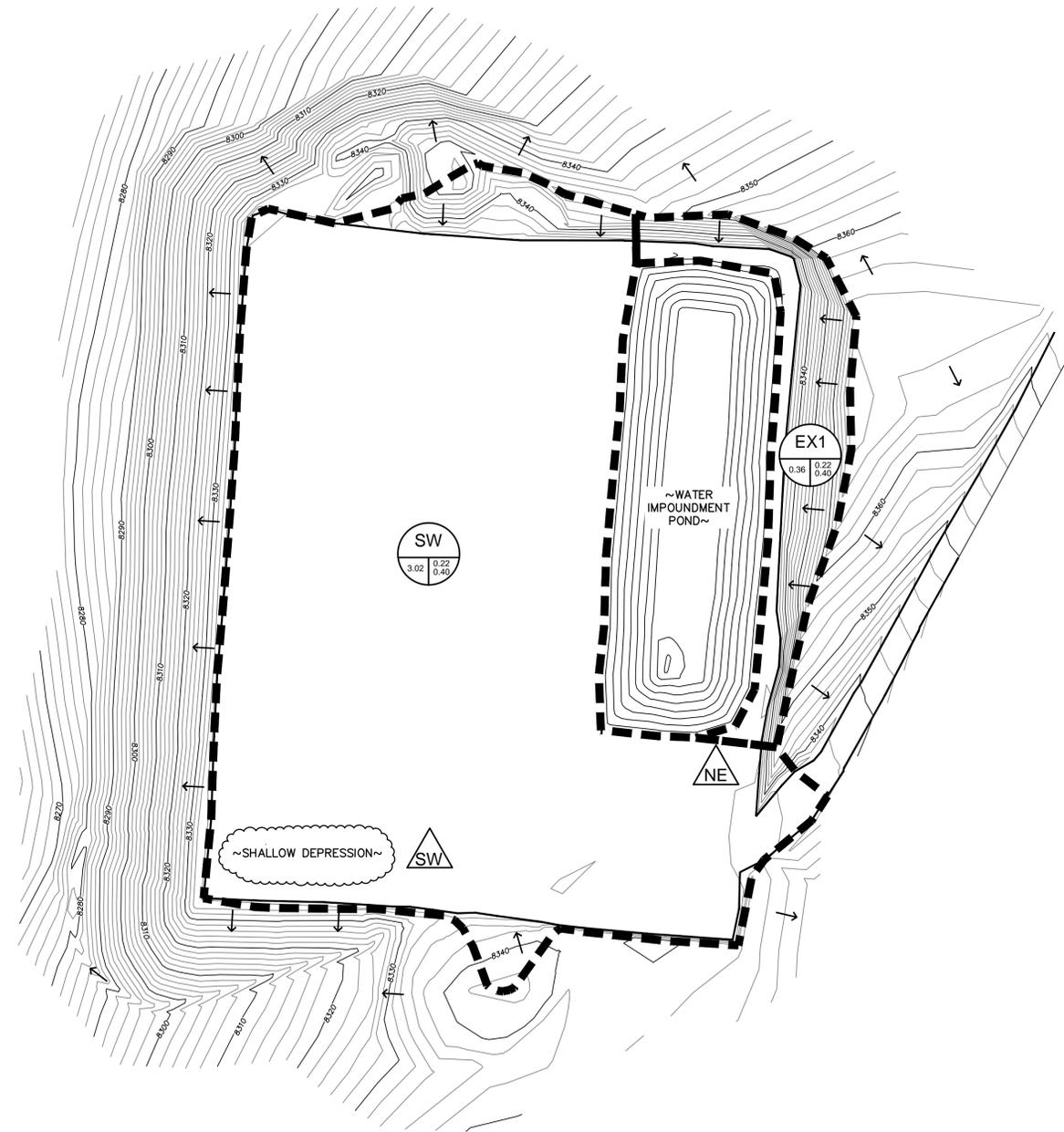


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DWG: F:\Projects\012-1372\WTRSR\Retrofit\09_121372_DTL.dwg
 DATE: Nov 06, 2013 1:00pm
 USER: dfox
 XREFS: 121372_TB



EXISTING/PROPOSED DRAINAGE CONDITIONS

LEGEND

- BASIN BOUNDARY
- BD
X Y
BASIN DESIGNATION
- 10 YR RUNOFF COEFF.
- 100 YR RUNOFF COEFF.
- BASIN AREA IN ACRES
- EXISTING MINOR CONTOUR
- 8340--- EXISTING MAJOR CONTOUR
- ↑ DRAINAGE FLOW DIRECTION
- △ NE
DESIGN POINT

NOTES

1. NO BUILDING, STRUCTURE OR FILL WILL BE PLACED IN THE WATER IMPOUNDMENT AREA AND NO CHANGES OR ALTERATIONS AFFECTING THE HYDRAULIC CHARACTERISTICS OF THE WATER IMPOUNDMENT AREA WILL BE MADE WITHOUT THE APPROVAL OF THE COUNTY.
2. MAINTENANCE AND OPERATION OF THE WATER IMPOUNDMENT AREA IS THE RESPONSIBILITY OF THE PROPERTY OWNER. IF OWNER FAILS IN THIS RESPONSIBILITY, THE COUNTY HAS THE RIGHT TO ENTER THE PROPERTY, MAINTAIN THE WATER IMPOUNDMENT AREA, AND BE REIMBURSED FOR COSTS INCURRED.
3. ALL DRAINAGE APPURTENANCES AND BASIN BOUNDARIES SHALL BE VERIFIED. AS-BUILT DRAWINGS SHALL BE PREPARED BY A REGISTERED PROFESSIONAL ENGINEER PRIOR TO ISSUANCE OF CERTIFICATE OF OCCUPANCY FOR ANY STRUCTURE WITHIN THE DEVELOPMENT.
4. PERMISSION TO REPRODUCE THESE PLANS IS HEREBY GIVEN TO GARFIELD COUNTY FOR COUNTY PURPOSES ASSOCIATED WITH PLAN REVIEW, APPROVAL, PERMITTING, INSPECTION AND CONSTRUCTION OF WORK.

EXISTING/PROPOSED DRAINAGE BASIN SUMMARY

| DESIGN PT. | BASIN I.D. | AREA (AC) | DISCHARGE 10-YR (CFS) | DISCHARGE 100-YR (CFS) |
|------------|------------|-----------|-----------------------|------------------------|
| NE | NE | 0.36 | 0.18 | 0.33 |
| SW | SW | 3.02 | 1.32 | 2.40 |

THE WATER IMPOUNDMENT POND IS SELF CONTAINING AND WILL NOT HAVE AN OUTLET INTO THE EXISTING TERRAIN.



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 CALL 811 SEVENTY-TWO HOURS PRIOR TO DIGGING, GRADING OR EXCAVATING FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES

| REV. NO. | DATE | REVISIONS DESCRIPTION |
|----------|----------|-----------------------|
| 1 | 10/31/13 | AS-COMPLETED |

| DRAINAGE SUMMARY | 2013 |
|--|------|
| 596-32C WATER IMPOUNDMENT RETROFIT MARATHON OIL COMPANY | |
| GARFIELD COUNTY, COLORADO | |

drawn by: MEO
 checked by: WEP
 approved by: WEP
 QA/QC by: WEP
 project no.: 012-1372
 drawing no.: 09_121372_DRNG.dwg
 date: 08.30.2013