

# HALEY'S DITCH REMEDIATION AND RESTORATION GRADING AND SWP3

CITY OF AKRON  
 COUNTY OF SUMMIT  
 STATE OF OHIO  
 2009

THE CONTRACTORS/SUBCONTRACTORS MUST FILE A CO-PERMITTEE UNDER THE PERMITTED OSPA CONSTRUCTION STORM WATER PERMIT BY SIGNING BELOW, THE NOI PERMITTEE AND CO-PERMITTEE HAVE ACKNOWLEDGED THAT THEY HAVE FAMILIARIZED THEMSELVES WITH SWP3 DRAWINGS PRIOR TO CONSTRUCTION AND WILL ADHERE TO THE REQUIREMENTS IN THE OSPA PERMIT AND THESE PLANS.

NOI PERMITTEE:

SIGNATURE \_\_\_\_\_ DATE \_\_\_\_\_  
 CONTACT NAME: \_\_\_\_\_  
 CONTACT NUMBER: \_\_\_\_\_  
 CONTACT ADDRESS: \_\_\_\_\_

NOI CO-PERMITTEE:

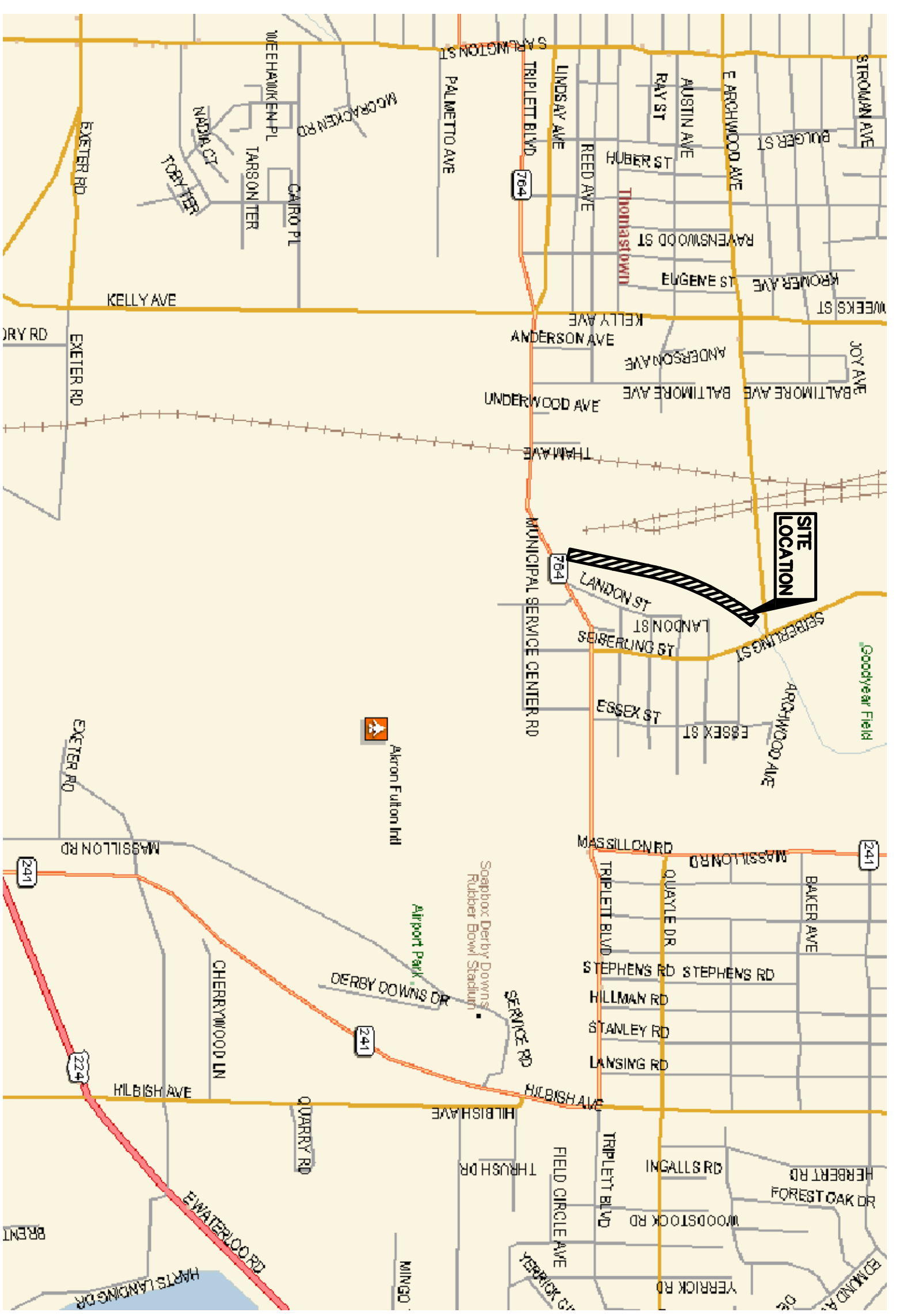
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NOI CO-PERMITTEE:

SIGNATURE \_\_\_\_\_ DATE \_\_\_\_\_  
 CONTACT NAME: \_\_\_\_\_  
 CONTACT NUMBER: \_\_\_\_\_  
 CONTACT ADDRESS: \_\_\_\_\_



LOCATION MAP  
 SCALE: N.T.S.

PREPARED FOR:

LOOKHEAD MARTIN  
 1210 MASSILLON ROAD  
 AKRON, OHIO 44315  
 CONTACT: STEVE VARDAVAS  
 PHONE: 330-796-2185

PREPARED BY:

RIVERWORKS  
 3781 DARROW ROAD  
 STOW, OHIO 44224  
 CONTACT: JAMIE KREJSA  
 PHONE: 330-688-0111

GPD GROUP  
 520 S. MAIN STREET  
 AKRON, OHIO 44311  
 CONTACT: MATT LASCOLO  
 PHONE: 330-527-2100

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NOTE: DESIGN/BUILD USE ONLY

**UNDERGROUND UTILITIES**

2 WORKING DAYS  
 BEFORE YOU DIG (TOLL FREE)  
 OHIO UTILITIES PROTECTION SERVICE  
 NON-MEMBERS  
 MUST BE CALLED DIRECTLY

REV.	DATE	DESCRIPTION

**HALEY'S DITCH  
 REMEDIATION AND RESTORATION  
 GRADING & SWP3**

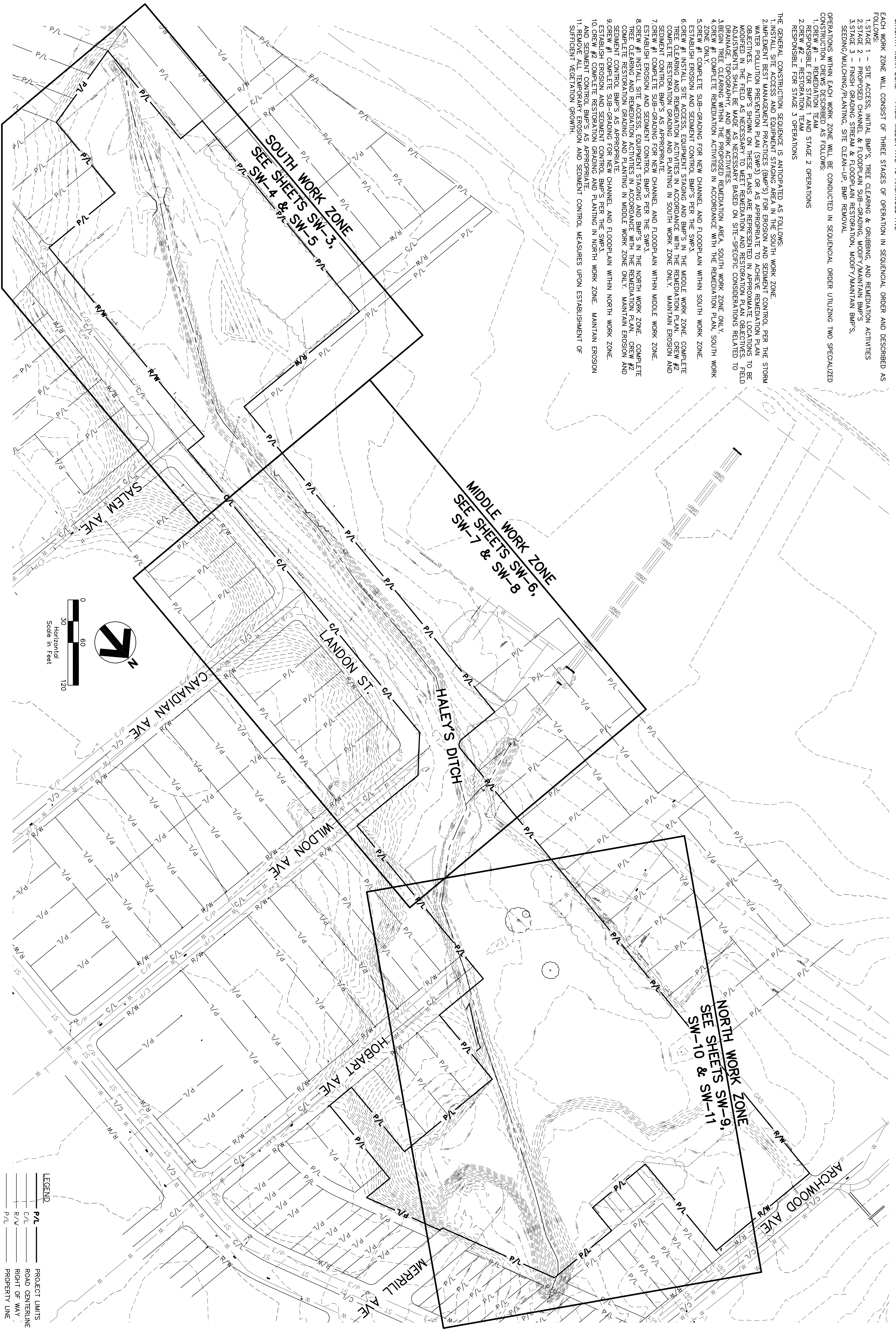
TITLE SHEET

DESIGNED	DATE
JR	4-16-09
DRAWN	4-16-09
CHECKED	4-17-09
MAL	

JOB NO.  
**2009213.00**

SW-1





**GENERAL ANTICIPATED CONSTRUCTION SEQUENCE**

THE PROJECT WILL BE COMPLETED IN THREE ZONES OF OPERATION FROM AN UPSTREAM TO DOWNSTREAM MANNER AND REFERENCED AS FOLLOWS:

1. SOUTH WORK ZONE - FROM SHERITT BLVD TO SALEM AVE
2. MIDDLE WORK ZONE - FROM WILDON AVE TO ARCHWOOD AVE
3. NORTH WORK ZONE - FROM WILDON AVE TO ARCHWOOD AVE

EACH WORK ZONE WILL CONSIST OF THREE STAGES OF OPERATION IN SEQUENTIAL ORDER AND DESCRIBED AS FOLLOWS:

1. STAGE 1 - SITE ACCESS, INITIAL BMP'S, TREE CLEARING & GRUBBING, AND RESTORATION ACTIVITIES
2. STAGE 2 - PROPOSED CHANNEL & FLOODPLAIN SUB-GRADING, MODIFY/MAINTAIN BMP'S
3. STAGE 3 - FINISH GRADING STREAM & FLOODPLAIN RESTORATION, MODIFY/MAINTAIN BMP'S, SEEDING/MULCHING/PLANTING, SITE CLEAN-UP, BMP REMOVAL

OPERATIONS WITHIN EACH WORK ZONE WILL BE CONDUCTED IN SEQUENTIAL ORDER UTILIZING TWO SPECIALIZED CONSTRUCTION CREWS DESCRIBED AS FOLLOWS:

1. RESPONSIBLE CREW #1 - RESTORATION TEAM
2. CREW #2 - RESTORATION TEAM
3. RESPONSIBLE CREW #3 - RESTORATION TEAM

THE GENERAL CONSTRUCTION SEQUENCE IS ANTICIPATED AS FOLLOWS:

1. INSTALL SITE ACCESS AND EQUIPMENT STAGING AREA IN THE SOUTH WORK ZONE.
2. IMPLEMENT BEST MANAGEMENT PRACTICES (BMP'S) FOR EROSION AND SEDIMENT CONTROL PER THE STORM WATER POLLUTION PREVENTION PLAN (SWP3) OR AS APPROPRIATE TO ACHIEVE RESTORATION PLAN OBJECTIVES. ALL BMP'S SHOWN ON THESE PLANS ARE REPRESENTED IN APPROXIMATE LOCATIONS TO BE MODIFIED IN THE FIELD AS NECESSARY TO MEET RESTORATION AND RESTORATION PLAN OBJECTIVES. FIELD ADJUSTMENTS SHALL BE MADE AS NECESSARY BASED ON SITE-SPECIFIC CONSIDERATIONS RELATED TO EROSION AND SEDIMENT CONTROL.
3. BEGIN TREE CLEARING WITHIN THE PROPOSED RESTORATION AREA, SOUTH WORK ZONE ONLY.
4. CREW #1 COMPLETE RESTORATION ACTIVITIES IN ACCORDANCE WITH THE RESTORATION PLAN, SOUTH WORK ZONE ONLY.
5. CREW #1 COMPLETE SUB-GRADING FOR NEW CHANNEL AND FLOODPLAIN WITHIN SOUTH WORK ZONE.
6. ESTABLISH EROSION AND SEDIMENT CONTROL BMP'S PER THE SWP3.
7. CREW #1 INSTALL SITE ACCESS, EQUIPMENT STAGING AND BMP'S IN THE MIDDLE WORK ZONE. COMPLETE TREE CLEARING AND RESTORATION ACTIVITIES IN ACCORDANCE WITH THE RESTORATION PLAN. CREW #2 COMPLETE RESTORATION GRADING AND PLANTING IN SOUTH WORK ZONE ONLY. MAINTAIN EROSION AND SEDIMENT CONTROL BMP'S AS APPROPRIATE.
8. ESTABLISH EROSION AND SEDIMENT CONTROL BMP'S PER THE SWP3.
9. CREW #1 INSTALL SITE ACCESS, EQUIPMENT STAGING AND BMP'S IN THE NORTH WORK ZONE. COMPLETE TREE CLEARING AND RESTORATION ACTIVITIES IN ACCORDANCE WITH THE RESTORATION PLAN. CREW #2 COMPLETE RESTORATION GRADING AND PLANTING IN MIDDLE WORK ZONE ONLY. MAINTAIN EROSION AND SEDIMENT CONTROL BMP'S AS APPROPRIATE.
10. CREW #2 COMPLETE RESTORATION GRADING AND PLANTING IN NORTH WORK ZONE. MAINTAIN EROSION AND SEDIMENT CONTROL BMP'S AS APPROPRIATE.
11. REMOVE ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES UPON ESTABLISHMENT OF SUFFICIENT VEGETATION GROWTH.

SW-2	JOB NO.	2009213.00
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**HALEY'S DITCH  
 REMEDIATION AND RESTORATION  
 GRADING & SWP3**

PROJECT KEY PLAN

REV.	DATE	DESCRIPTION

GLAIS PREE SCHWAB BURKE & ORSHWEN INC.

GPD ASSOCIATES

520 South Main Street, Suite 2531  
 Akron, Ohio 44311  
 330-572-2100 • Fax 330-572-2101

A Partnership for Stream & Wetland Restoration

**TYPE OF CONSTRUCTION ACTIVITY**

1. THE PROPOSED HALEY'S DITCH REMEDIATION AND RESTORATION PROJECT IS PART OF A VOLUNTARY ACTION PLAN INITIATED BY LOCKHEED MARTIN. THE PROJECT INVOLVES VOLUNTARY REMEDIAL EARTHWORK ACTIVITIES TO REMOVE SEDIMENTS AND SOILS ALONG HALEY'S DITCH THAT HAVE BEEN IMPACTED BY POLYCHLORINATED BIPHENYLS (PCBS). ALL REMEDIATION AND RESTORATION ACTIVITY SHALL BE IMPLEMENTED BY THE LOCKHEED MARTIN REMEDIATION PLAN PER APPROVAL BY THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY (US EPA) FOR RISK-BASED DISPOSAL OF PCB REMEDIATION WASTE AND BY THE UNITED STATES ARMY CORPS OF ENGINEERS IN CONFORMANCE WITH NATIONWIDE PERMIT 38.

REMEDIATION EARTHWORK ACTIVITIES WILL INCLUDE EXCAVATION OF SOIL TO A DEPTH OF 1-FOOT TO 3-FOOT. EXCAVATED SOILS CONTAINING PCB'S ABOVE THE REMEDIATION LIMIT SHALL BE STOCKPILED ON SITE FOR 90 DAYS. THE STOCKPILED SOILS SHALL BE REMOVED FROM THE PROJECT AREA AND PLACED IN A REMEDIATION AREA. THE 9.13-ACRE PROJECT AREA SHOWN ON THE PLAN, PLANNED TO REMAIN WITHIN THE 9.13-ACRE PROJECT AREA SHOWN ON THE PLAN. REMEDIAL ACTIVITY MAY CAUSE A MINOR EXPANSION OF THE DISTURBANCE LIMITS TO ALLOW ACCESS AND STAGING OF EQUIPMENT AND MATERIALS. WORK RIGHT AGREEMENTS FOR REMEDIATION AND RESTORATION ACTIVITY HAVE BEEN OBTAINED BY LOCKHEED MARTIN FOR THE DELINEATED PROJECT AREA AND ANY SUBSEQUENT WORK LIMITS. ALL DISTURBED AREAS WILL BE RESTORED TO NATURAL OR BETTER THAN EXISTING CONDITIONS IN ACCORDANCE WITH THE LOCKHEED MARTIN RESTORATION PLAN.

RESTORATION EARTHWORK ACTIVITIES WILL INCLUDE CHANNEL, FLOODPLAIN, AND WETLAND ENHANCEMENTS WITHIN THE LIMITS IMPACTED BY REMEDIAL ACTION.

EARTHWORK ACTIVITIES SHALL BE CONDUCTED IN ACCORDANCE WITH THE CITY OF AKRON GRADING PERMIT. EROSION AND SEDIMENT CONTROL BEST MANAGEMENT PRACTICES (BMP'S) SHALL BE CONDUCTED PER THE PROJECT STORMWATER POLLUTION PREVENTION PLAN (SWP3) IN ACCORDANCE WITH OHIO EPA REQUIREMENTS, SUMMIT COUNTY SOIL AND WATER CONSERVATION DISTRICT, AND CITY OF AKRON. THE SWP3 SHALL BE AVAILABLE AT THE PROJECT SITE FOR A REFERENCE TO BMP ACTIVITY. HOWEVER, THE VARIABILITY OF EROSION AND SEDIMENT CONTROL BMP'S WILL BE MODIFIED AS APPROPRIATE TO COMPLETE THE NECESSARY REMEDIAL ACTIVITIES IN ACCORDANCE WITH THE LOCKHEED MARTIN RESTORATION PLAN. THE SWP3 SHALL BE MODIFIED AS APPROPRIATE TO COMPLETE REMEDIAL ACTIVITY WILL DEPEND ON A NUMBER OF CONSIDERATIONS THAT INCLUDE THE SCOPE OF ACTIVITIES, SITE TOPOGRAPHY, TYPE OF GROUND COVER, WHETHER CONTROLS ARE LAND-BASED OR WATER-BASED, AND OPERATIONAL/MAINTENANCE CONDITIONS. SOILS TARGETED FOR REMEDIATION WILL BE MANAGED TO CONTROL RUNOFF FROM THE REMEDIATION AREA. SOILS TARGETED FOR REMEDIATION WILL NOT BE REUSED ON THE PROJECT SITE.

TREE LOGS AND WOOD MULCH CHIPS SHALL BE HARVESTED AND STOCKPILED ON SITE FROM THE CLEARING ACTIVITY. THE STOCKPILED MATERIALS SHALL BE SIZED AS PART OF THE STOCKPILED MATERIALS. TREE LOGS AND WOOD MULCH CHIPS SHALL BE REMOVED FROM THE PROPOSED EXCAVATION AREA. SOILS SHALL BE REMOVED FROM THE SITE FOR DISPOSAL AS A PART OF THE REMEDIAL WORK PLAN.

ALL IMPORT OF SOIL, SAND, GRAVEL AND COBBLE MATERIALS FOR RESTORATION ACTIVITIES WILL BE OBTAINED VIA LOCAL SUPPLIERS FROM A SOURCE THAT DOES NOT CONTAIN PCB'S AT CONCENTRATIONS ABOVE ESTABLISHED CRITERIA.

ALL DISTURBED REMEDIATION SOIL AREAS WILL BE RESTORED WITH CLEAN TOPSOIL, SEEDING, AND PLANTINGS TO INITIATE REFORESTATION OF THE RIPARIAN CORRIDOR.

2. TOTAL AREA OF DISTURBANCE: 9.13 ACRES

3. RUNOFF COEFFICIENTS/IMPERVIOUS AREA: THERE WILL BE NO INCREASE IN IMPERVIOUS AREA UPON COMPLETION OF PROJECT. THEREFORE, THERE IS NO CHANGE IN RUNOFF COEFFICIENTS, AND NO POST CONSTRUCTION WATER QUALITY BMP'S REQUIRED. THE INTENTION OF THE PROJECT IS TO BETTER ENHANCE THE EXISTING CONDITIONS TO A RESTORED RIPARIAN CORRIDOR.

4. DESCRIPTION OF HSG SOILS:  
 C9-CANAL BANK, URBAN LAND COMPLEX, UNDULATING  
 Uf-URB-DORTMENTS, SANITARY LANDFILL  
 Ur-URBAN LAND

5. THIS CONTRACT DRAWING SHALL BE MADE AVAILABLE ON SITE AT ALL TIMES AND PRESENTED UPON REQUEST. IF UNFORESEEN STORM WATER POLLUTION PREVENTION IS ENCOUNTERED, ADDITIONAL STORM WATER POLLUTION PREVENTION (SWPP) MEASURES MAY BE REQUESTED BY THE OWNER, CITY, PROJECT ENGINEER OR SOIL CONSERVATION SERVICE REPRESENTATIVE AT ANYTIME. SUCH REQUESTS SHALL BE IMPLEMENTED IMMEDIATELY AT CONTRACTOR'S EXPENSE.

6. ALL STORM WATER POLLUTION PREVENTION ITEMS SHALL BE INSTALLED AS SHOWN OR NOTED ON ALL SWP3 PLAN SHEETS.

7. FOR DISTURBED AREAS WITH-IN 50 FEET OF A STREAM REMAINING DORMANT FOR OVER 21 DAYS, TEMPORARY EROSION CONTROLS SHALL BE APPLIED WITH-IN 7 DAYS. FOR DISTURBED AREAS OVER REMAINING DORMANT FOR OVER 90 DAYS, TEMPORARY EROSION CONTROLS SHALL BE APPLIED WITH-IN 7 DAYS. ALL DISTURBED AND ERODED EARTH SHALL BE REPAIRED AND SEEDS AS CONTROLLED ABOVE AND AS SHOWN ON THE TABLE BELOW, TO ESTABLISH STABILITY AND PROVIDE SEDIMENT CONTROL, WHERE POSSIBLE. TEMPORARY SEEDING GROWTH SHALL NOT BE MOWED UNTIL IT HAS GONE TO SEED FOR 1 YEAR.

**TEMPORARY SEEDING SPECIFICATIONS:**

SEEDING DATES	SEED TYPE	APPLICATION RATE PER 1,000 S.F.
MARCH 1 - AUGUST 15	OATS PERENNIAL RYE GRASS OR TALL FESCUE	3#
AUGUST 16 - NOVEMBER 1	RYE, WHEAT OR PERENNIAL RYE GRASS TALL FESCUE	3# 1#
AFTER NOVEMBER 1	STRAW OR HAY MULCH	2-3 BALES 100#
SEED BED PREPARATION	LIME 10-10-10 OR 12-12-12 FERTILIZER	12-15#

8. FOR DISTURBED AREAS WHICH HAVE REACHED FINAL GRADE WITH-IN 50 FEET OF A STREAM, PERMANENT VEGETATION SHALL BE INSTALLED WITHIN 2 DAYS OF FINAL GRADE WORK, WEATHER PERMITTING.

9. CONTRACTOR SHALL INSPECT ALL SWPP MEASURES DAILY AND REPAIR AS NECESSARY TO PREVENT EROSION. SILTATION SHALL BE REMOVED FROM AREAS WHERE FAILURES HAVE OCCURRED AND CORRECTIVE ACTION TAKEN WITHIN 24 HOURS TO MAINTAIN ALL SWPP.

10. CONSTRUCTION ENTRANCES, AND SILT FENCES SHALL REMAIN IN PLACE UNTIL A GOOD STAND OF GRASS HAS BEEN OBTAINED AND OPERATIONS ARE COMPLETE. CONTRACTOR SHALL KEEP SILT FROM ENTERING ANY ADJACENT AREAS. ALL SILT SHALL BE COMPLETELY STABILIZED. ANY SILT IN PIPES AND DRAINAGE SWALES SHALL BE REMOVED WITHIN 10 DAYS.

11. TEMPORARY SEDIMENTATION AND STORM WATER POLLUTION PREVENTION MEASURES MUST BE INSPECTED AND LOGGED BY THE NOI PERMITTEE, AND NOI CO-PERMITTEES FOR INSPECTION, LOGGING SHALL BE WEEKLY AND AFTER RAIN STORMS. THE LOG FORMS CAN BE OBTAINED AT THE SUMMIT COUNTY SOIL AND WATER CONSERVATION DISTRICT OFFICE. LOG FORMS SHALL BE PLACED IN ONE COMMON AREA AND SHALL BE MAINTAINED IN ASCENDING ORDER OF DATE COMPLETED.

12. IF AT ANY TIME UTILITY COMPANIES ARE REQUIRED TO PARTICIPATE IN CONSTRUCTION, UTILITY COMPANIES MUST COMPLY WITH ALL STORM WATER POLLUTION PREVENTION MEASURES AS DEFINED ON THE STORM WATER POLLUTION PREVENTION PLANS, DETAILS AND NOTES.

13. ALL EXISTING WATER COURSES WITHIN THE PROJECT LIMITS SHALL BE TEMPORARILY PROTECTED DURING LAND CLEARING AND GRADING OPERATIONS. SOILS WITHIN 50 FEET OF SAID WATER COURSES SHALL BE STABILIZED WITHIN 2 DAYS OF THE INITIAL CLEARING / GRADING OPERATION AS SHOWN ON PLANS.

14. IT IS THE NOI PERMITTEES AND NOI CO-PERMITTEES RESPONSIBILITY TO MAINTAIN ALL SEDIMENTATION AND STORM WATER POLLUTION PREVENTION ITEMS AT ALL TIMES.

15. THE FOLLOWING STORM WATER POLLUTION PREVENTION AND SEDIMENT CONTROL MEASURES WILL BE USED ON THIS SITE:

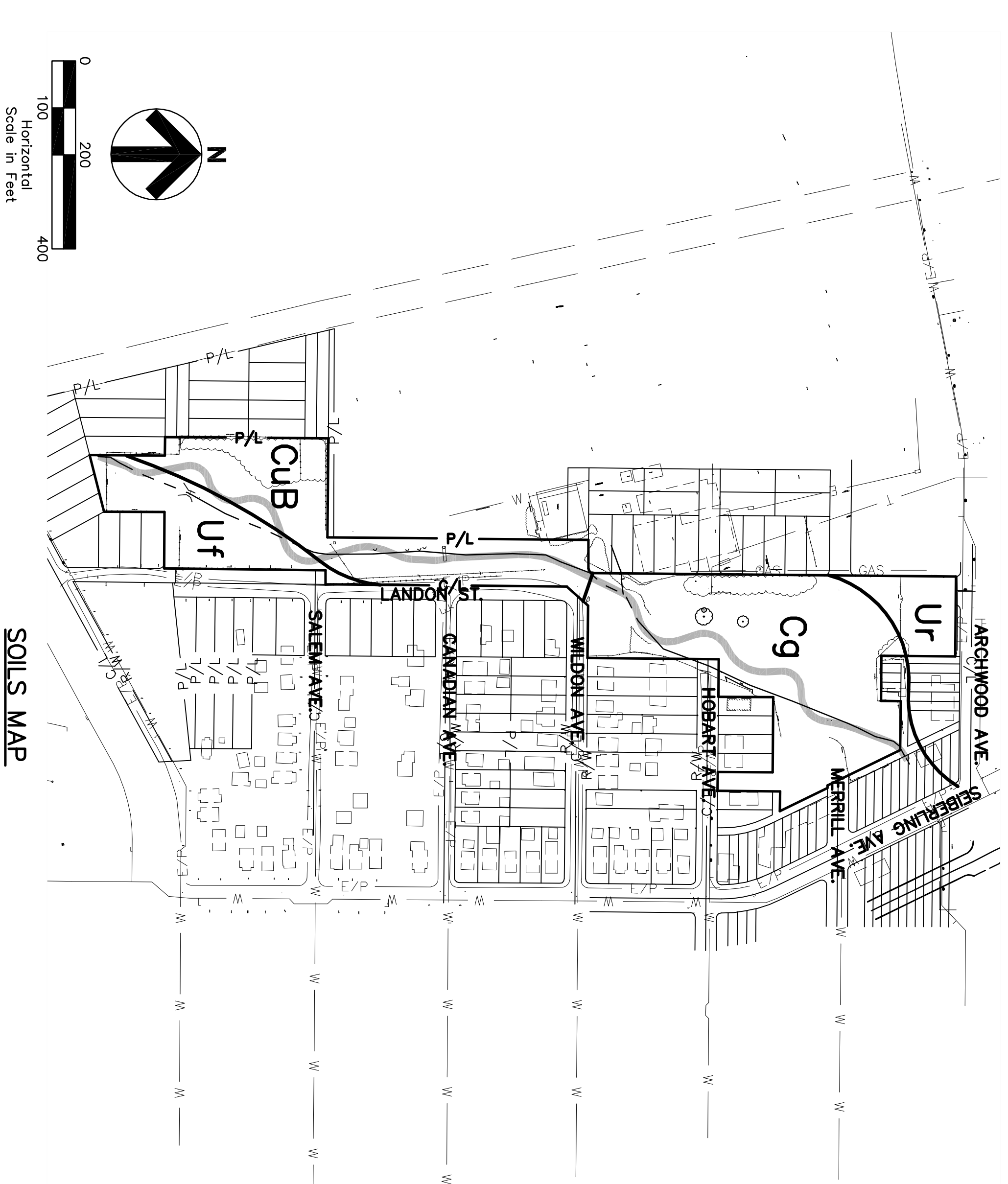
- 1A. SILT FENCE
- 1B. CONSTRUCTION ENTRANCE
- 1C. CONTROL MATTING
- 1D. ROCK CHANNEL PROTECTION
- 1E. ROCK CHECK DAMS
- 1F. TREE PROTECTION FENCING
- 1G. TREE PROTECTION FENCING
- 1H. BY-PASS PUMPING
- 1I. TEMPORARY AND PERMANENT SEEDING/LANDSCAPING

16. PERMANENT VEGETATION SHALL NOT BE CONSIDERED ESTABLISHED UNTIL A GROUND COVER IS ACHIEVED WHICH IS MATURE ENOUGH TO CONTROL SOIL EROSION AND WILL SURVIVE SEVERE WEATHER CONDITIONS.

17. ANY PONDED OR ACCUMULATED WATER ENCOUNTERED IN ACTIVE EXCAVATIONS DURING CONSTRUCTION SHALL BE TREATED PRIOR TO DISCHARGE.

18. PERMETER CONTROLS SHALL BE INSTALLED/IMPLEMENTED PER THE CONSTRUCTION SEQUENCE IN THIS PLAN SET (AS REQUIRED). IN AREAS WHERE THE PLANS DO NOT SPECIFY, OR AREAS WHICH ARE IN ADDITION TO PLANS SPECIFICATIONS, PERMETER CONTROLS SHALL BE INSTALLED/IMPLEMENTED WITH-IN 7 DAYS OF GRADING ACTIVITIES AND PRIOR TO GRADING OF THE AREA THEY WILL CONTROL.

19. THE SWP3 PLANS SHALL BE KEPT ON SITE AT ALL TIMES DURING CONSTRUCTION (INCLUDING A COPY OF THE NOTICE OF INTENT, AND APPROVED EPA NPDES PERMIT). IT IS THE NOI PERMITTEES AND NOI CO-PERMITTEES RESPONSIBILITY TO MARK (IN A DOMINANT COLOR ON THE SWP3 PLANS) DAILY ANY MINOR MODIFICATIONS MADE TO THE APPROVED SWP3 PLAN SO AS TO KEEP A RECORD OF THE MODIFICATIONS MADE IN THE FIELD. ANY MAJOR FIELD CHANGES TO THE SWP3 PLANS WOULD REQUIRE THE PROJECT ENGINEER TO RE-EVALUATE THE SWP3 PLANS.



**SOILS MAP**

REV.	DATE	DESCRIPTION

**HALEY'S DITCH  
 REMEDIATION AND RESTORATION  
 GRADING & SWP3**

**PROJECT NOTES**

DESIGNED	DATE
JR	4-16-09
DRAWN	DATE
MLH	4-16-09
CHECKED	DATE
MLL	4-17-09

JOB NO.  
**2009213.00**

**SW-2A**

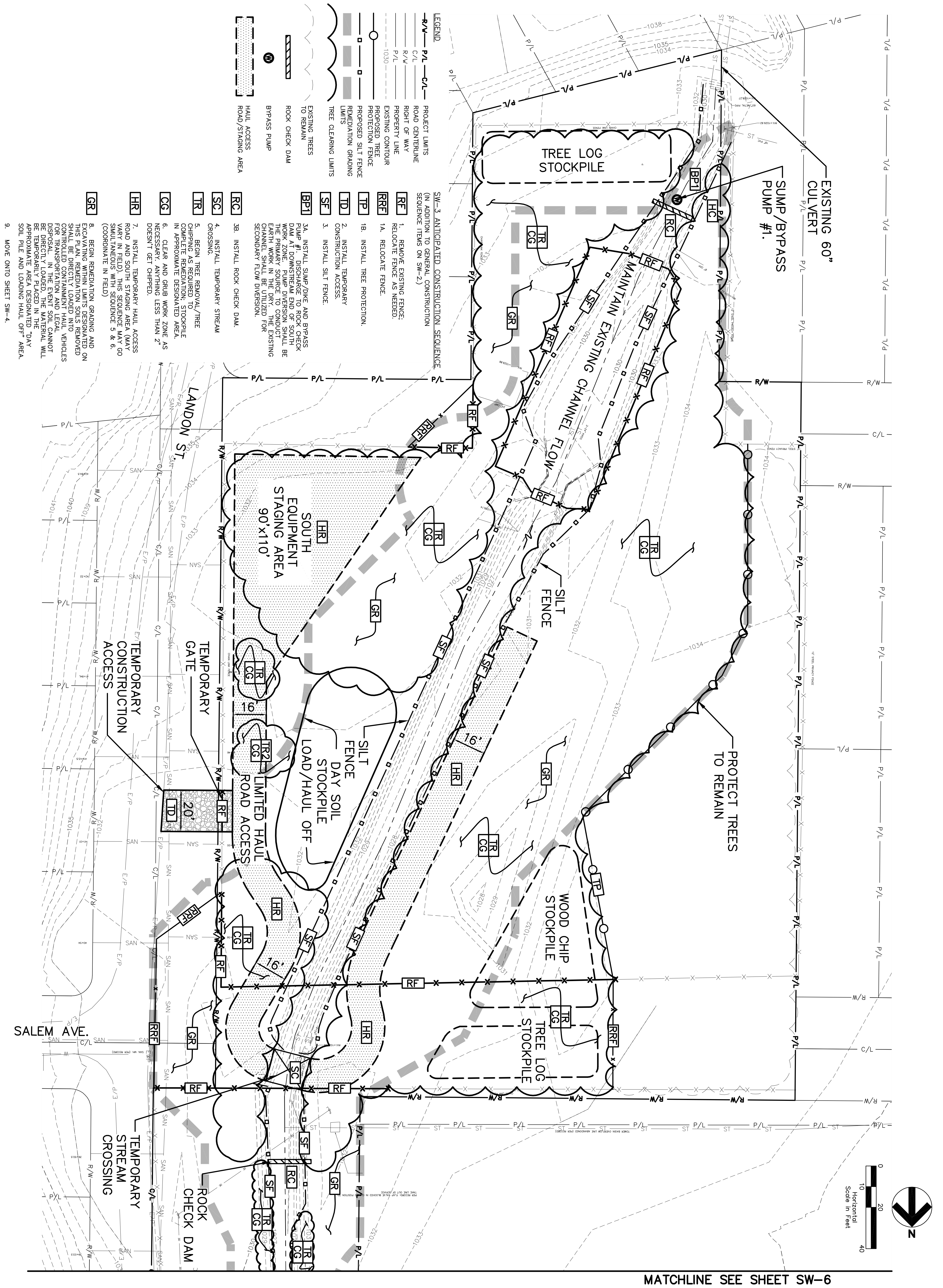
GLAIS PYLE SCHWABER BURKE & ORSHWEN INC.

**GPD ASSOCIATES**

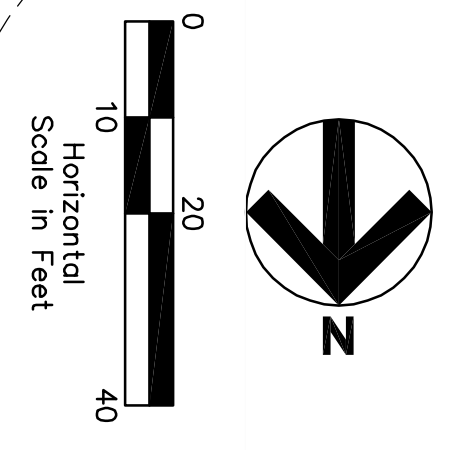
520 South Main Street, Suite 2531  
 Akron, Ohio 44311  
 330-572-2100, Fax 330-572-2101

**RiverWorks**  
 A Partnership for Stream & Wetland Restoration

Estimator: emanson



- LEGEND**
- P/L** PROJECT LIMITS
  - C/L** ROAD CENTERLINE
  - R/W** RIGHT OF WAY
  - P/L** PROPERTY LINE
  - 1030** EXISTING CONTOUR
  - PROPOSED TREE PROTECTION FENCE**
  - PROPOSED SILT FENCE**
  - REMEDIAL GRADING LIMITS**
  - TREE CLEARING LIMITS**
  - EXISTING TREES TO REMAIN**
  - ROCK CHECK DAM**
  - BYPASS PUMP**
  - HAUL ACCESS ROAD/STAGING AREA**
- SW-3 ANTICIPATED CONSTRUCTION SEQUENCE**  
 (IN ADDITION TO GENERAL CONSTRUCTION SEQUENCE ITEMS ON SW-2.)
- RF** 1. REMOVE EXISTING FENCE; RELOCATE FENCE AS NEEDED.
  - RRF** 1A. RELOCATE FENCE.
  - TP** 1B. INSTALL TREE PROTECTION.
  - TD** 2. INSTALL TEMPORARY CONSTRUCTION ACCESS.
  - SF** 3. INSTALL SILT FENCE.
  - BP1** 3A. INSTALL SUMP/DIKE AND BYPASS PUMP #1. DISCHARGE TO ROCK CHECK DAM AT DOWNSTREAM END OF SOUTH WORK ZONE. PUMP DIVERSION SHALL BE THROUGH SOUTH WORK ZONE. THE EXISTING CHANNEL SHALL BE UTILIZED FOR SECONDARY FLOW DIVERSION.
  - RC** 3B. INSTALL ROCK CHECK DAM.
  - SC** 4. INSTALL TEMPORARY STREAM CROSSING.
  - TR** 5. BEGIN TREE REMOVAL/TREE CHIPPING AS REQUIRED TO COMPLETE REMEDIATION. STOCKPILE IN APPROXIMATE DESIGNATED AREA.
  - CG** 6. CLEAR AND GRUB WORK ZONE AS NECESSARY. ANYTHING LESS THAN 2" DOESN'T GET CHIPPED.
  - HR** 7. INSTALL TEMPORARY HAUL ACCESS ROAD AND SOUTH STAGING AREA (MAY VARY IN FIELD). THIS SEQUENCE MAY GO SIMULTANEOUS WITH SEQUENCE 5 & 6. (COORDINATE IN FIELD)
  - GR** 8. BEGIN REMEDIATION GRADING AND EXCAVATION LIMITS DESIGNATED ON THIS PLAN. REMEDIATION SOILS REMOVED SHALL BE DIRECTLY LOADED INTO CONTROLLED CONTAINMENT AND LEGAL DISPOSAL. IN THE EVENT SOIL CANNOT BE DIRECTLY LOADED, THE MATERIAL WILL BE TEMPORARILY PLACED IN THE APPROXIMATE AREA DESIGNATED "DAY SOIL PILE AND LOADING HAUL OFF AREA."
  - 9. MOVE ONTO SHEET SW-4.



MATCHLINE SEE SHEET SW-6

SW-3	JOB NO.	2009213.00
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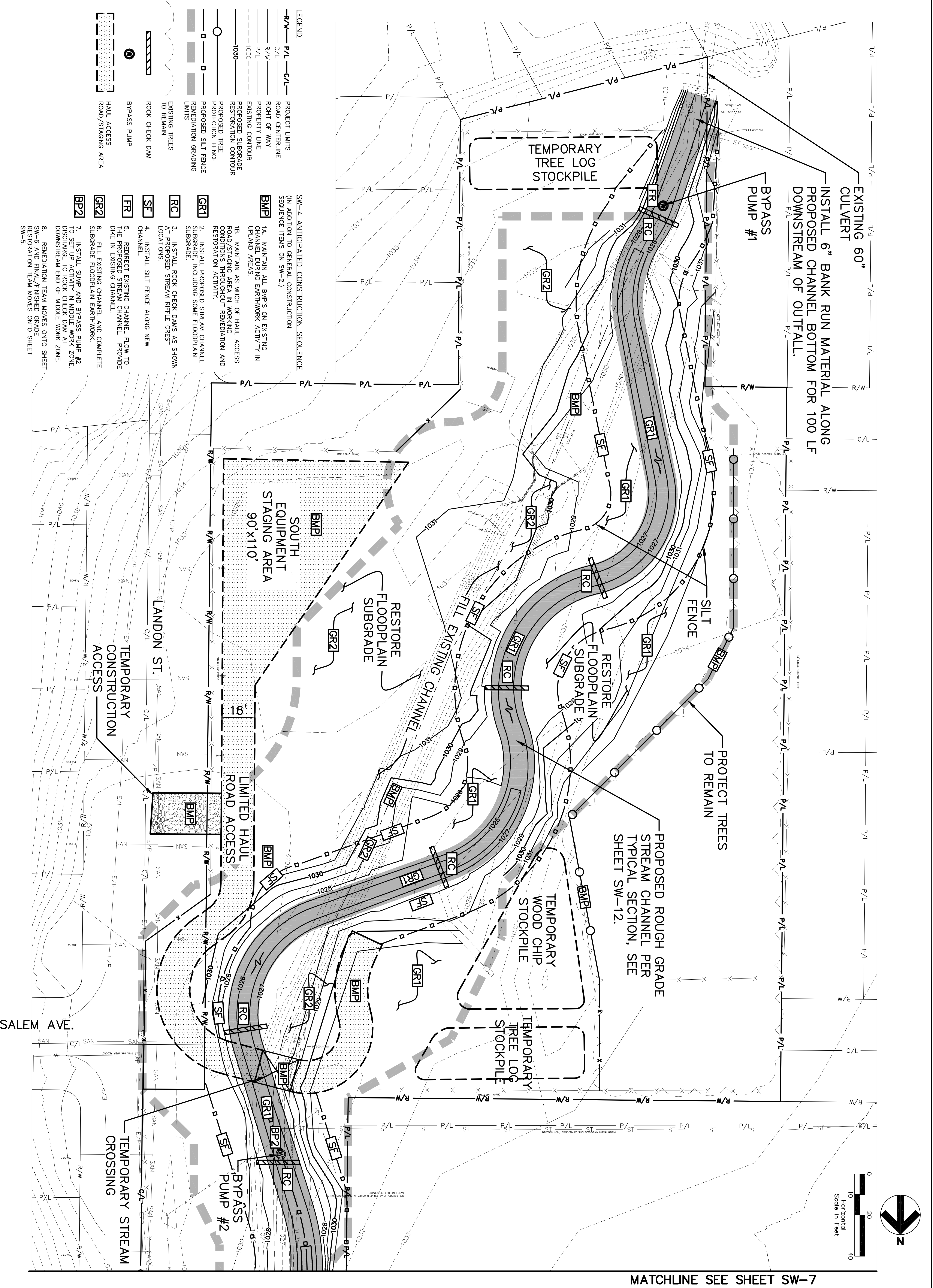
**SOUTH WORK ZONE - STAGE 1**

REV.	DATE	DESCRIPTION

**GPD ASSOCIATES**  
 520 South Main Street, Suite 2531  
 Akron, Ohio 44311  
 330-572-2100 • Fax 330-572-2101

**RiverWorks**  
 A Partnership for Stream & Wetland Restoration

Technician: emanson

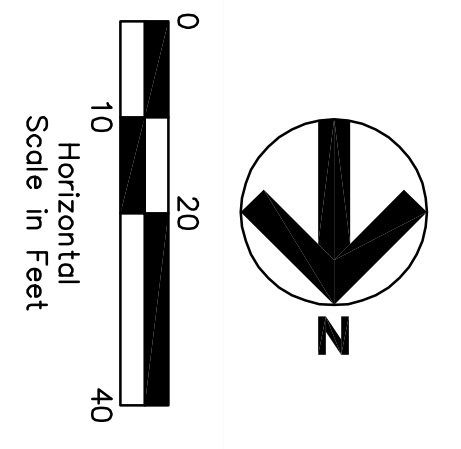


- LEGEND**
- R/W** PROJECT LIMITS
  - C/L** ROAD CENTERLINE
  - P/L** RIGHT OF WAY
  - P/L** PROPERTY LINE
  - 1030** EXISTING CONTOUR
  - 1030** PROPOSED SUBGRADE RESTORATION CONTOUR
  - 1030** PROTECTION FENCE
  - 1030** PROPOSED SILT FENCE REMEDIATION GRADING LIMITS
  - 1030** EXISTING TREES TO REMAIN
  - 1030** ROCK CHECK DAM
  - 1030** BYPASS PUMP
  - 1030** HAUL ACCESS ROAD/STAGING AREA

- SW-4 ANTICIPATED CONSTRUCTION SEQUENCE**  
 (IN ADDITION TO GENERAL CONSTRUCTION SEQUENCE TERMS ON SW-2.)
- BMP** 1A. MAINTAIN ALL BMP'S ON EXISTING CHANNEL DURING EARTHWORK ACTIVITY IN UPLAND AREAS.
  - 1B. MAINTAIN AS MUCH OF HAUL ACCESS ROAD/STAGING AREA IN WORKING CONDITIONS THROUGHOUT REMEDIATION AND RESTORATION ACTIVITY.
  - GRI** 2. INSTALL PROPOSED STREAM CHANNEL SUBGRADE, INCLUDING SOME FLOODPLAIN SUBGRADE.
  - RC** 3. INSTALL ROCK CHECK DAMS AS SHOWN AT PROPOSED STREAM RIFFLE CREST LOCATIONS.
  - SF** 4. INSTALL SILT FENCE ALONG NEW CHANNEL.
  - FR** 5. REDIRECT EXISTING CHANNEL FLOW TO THE PROPOSED STREAM CHANNEL. PROVIDE DIKE IN EXISTING CHANNEL.
  - GR2** 6. FILL EXISTING CHANNEL AND COMPLETE SUBGRADE FLOODPLAIN EARTHWORK.
  - BP2** 7. INSTALL SUMP AND BYPASS PUMP #2 TO SET UP ACTIVITY IN MIDDLE WORK ZONE. DISCHARGE TO ROCK CHECK DAM AT DOWNSTREAM END OF MIDDLE WORK ZONE.
  - 8. REMEDIATION TEAM MOVES ONTO SHEET SW-6 AND FINAL FINISHED GRADE RESTORATION TEAM MOVES ONTO SHEET SW-5.

EXISTING 60" CULVERT  
 INSTALL 6" BANK RUN MATERIAL ALONG PROPOSED CHANNEL BOTTOM FOR 100 LF DOWNSTREAM OF OUTFALL.  
 BYPASS PUMP #1

PROTECT TREES TO REMAIN  
 PROPOSED ROUGH GRADE STREAM CHANNEL PER TYPICAL SECTION, SEE SHEET SW-12.



MATCHLINE SEE SHEET SW-7

SW-4	DESIGNED	DATE
	JR	4-16-09
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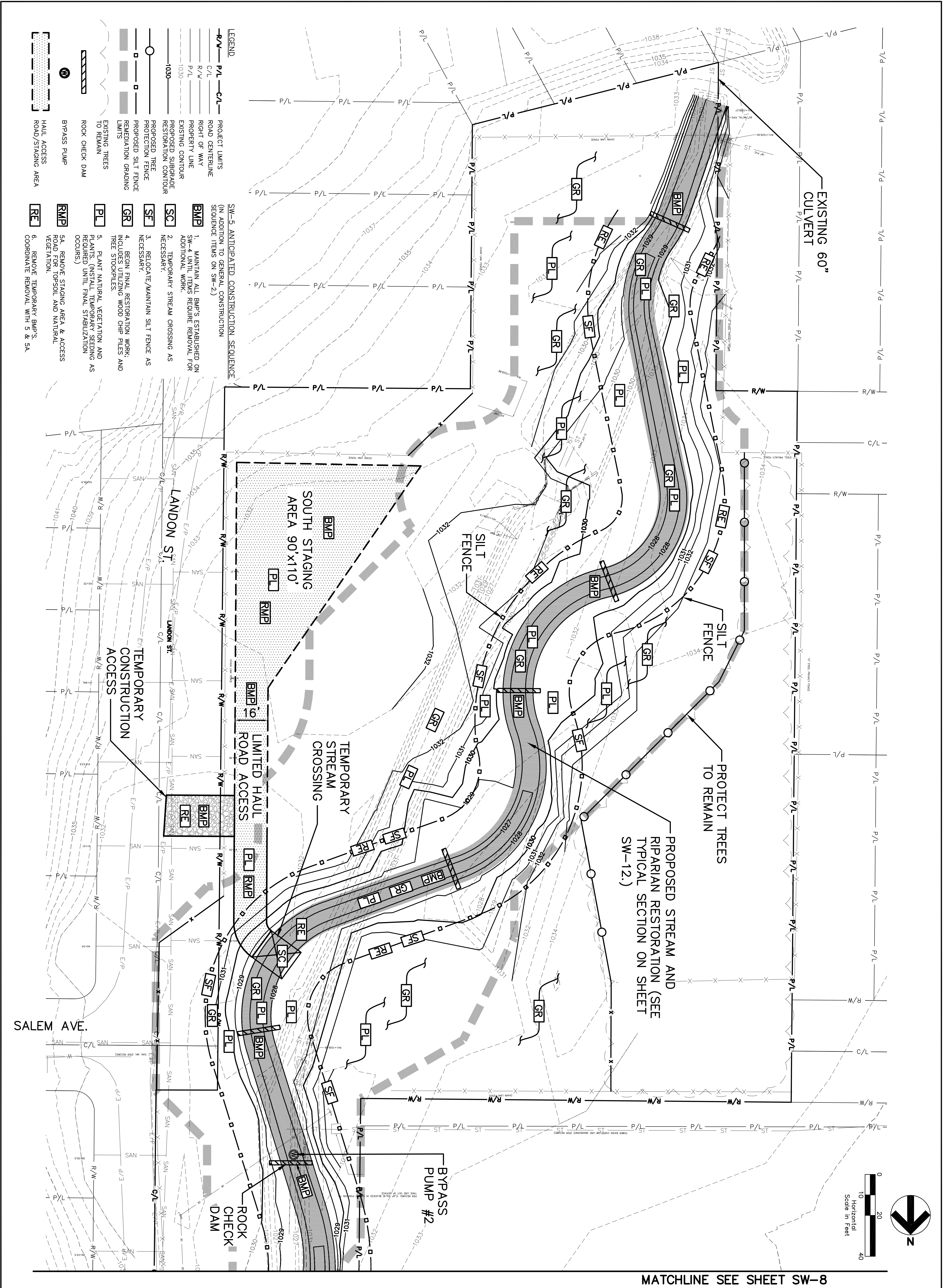
**HALEY'S DITCH**  
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 GRADING & SWP3

**SOUTH WORK ZONE - STAGE 2**

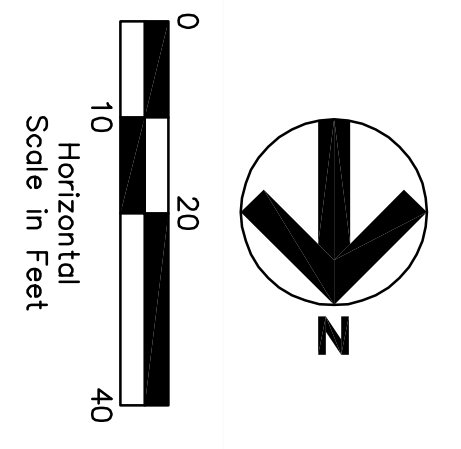
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  - C/L** ROAD CENTERLINE
  - R/W** RIGHT OF WAY
  - P/L** PROPERTY LINE
  - 1030** EXISTING CONTOUR
  - 1030** PROPOSED SUPERGRADE RESTORATION CONTOUR
  - PROPOSED TREE PROTECTION FENCE
  - PROPOSED SILT FENCE
  - ▨** REMEDIATION GRADING LIMITS
  - EXISTING TREES TO REMAIN
  - ▨** ROCK CHECK DAM
  - ⊙** BYPASS PUMP
  - ▨** HAUL ACCESS ROAD/STAGING AREA
- SW-5 ANTICIPATED CONSTRUCTION SEQUENCE (IN ADDITION TO GENERAL CONSTRUCTION SEQUENCE ITEMS ON SW-2)**
- BMP** 1. MAINTAIN ALL BMP'S ESTABLISHED ON SW-4 UNTIL ITEMS REQUIRE REMOVAL FOR ADDITIONAL WORK.
  - SC** 2. TEMPORARY STREAM CROSSING AS NECESSARY.
  - SF** 3. RELOCATE/MAINTAIN SILT FENCE AS NECESSARY.
  - GR** 4. BEGIN FINAL RESTORATION WORK: INCLUDES UTILIZING WOOD CHIP PILES AND TREE STOCKPILES.
  - PL** 5. PLANT NATURAL VEGETATION AND REQUIRED UNTIL FINAL STABILIZATION OCCURS.
  - RMP** 5A. REMOVE STAGING AREA & ACCESS ROAD FOR TOPSOIL AND NATURAL VEGETATION.
  - RE** 6. REMOVE TEMPORARY BMP'S COORDINATE REMOVAL WITH 5 & 5A.



MATCHLINE SEE SHEET SW-8

**SW-5**

JOB NO. 2009213.00

DESIGNED	DATE
DRAWN	4-16-09
CHECKED	4-16-09
MAIL	4-17-09

**HALEY'S DITCH  
 REMEDIATION AND RESTORATION  
 GRADING & SWP3**

**SOUTH WORK ZONE - STAGE 3**

REV.	DATE	DESCRIPTION

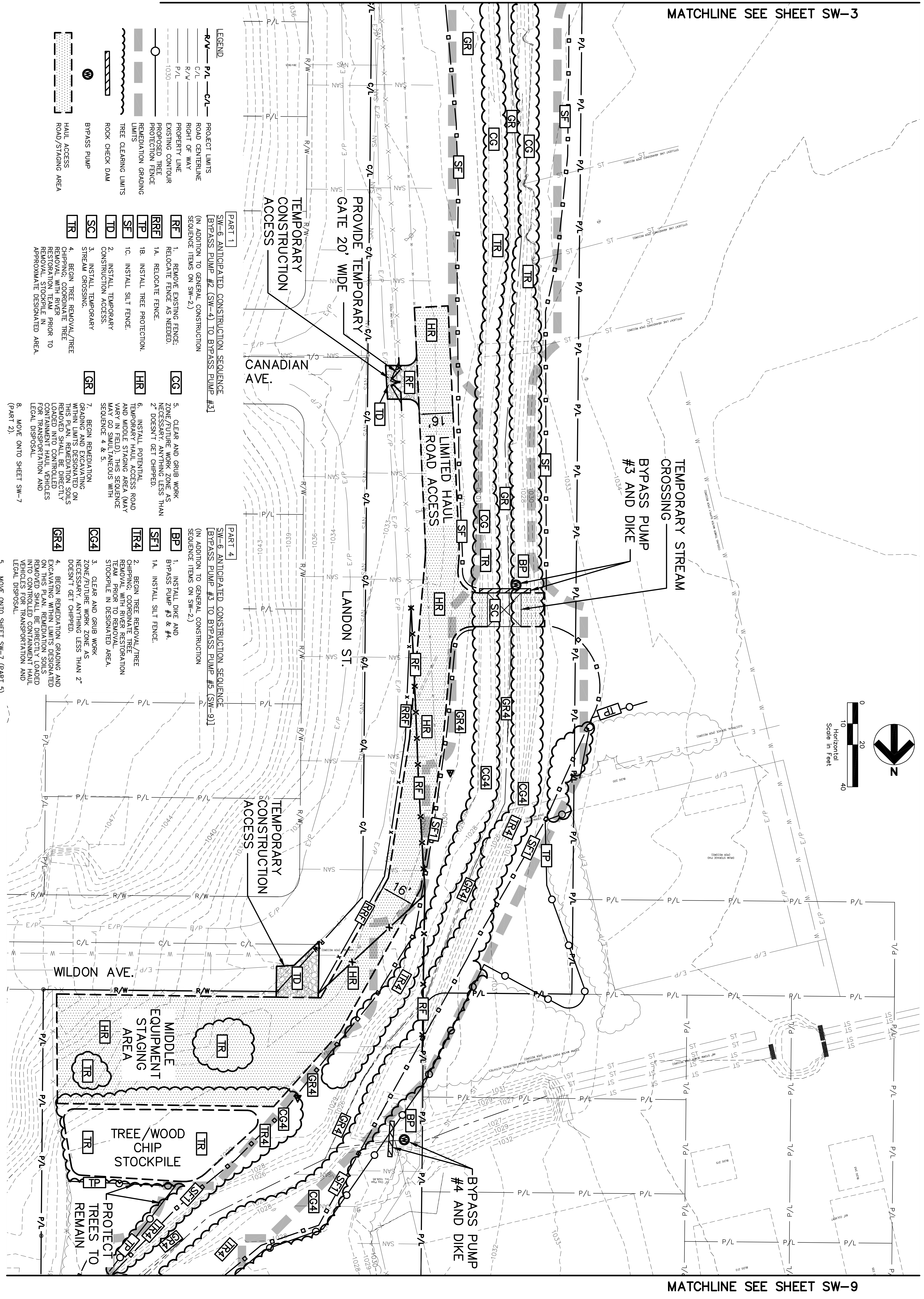
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**GPD ASSOCIATES**

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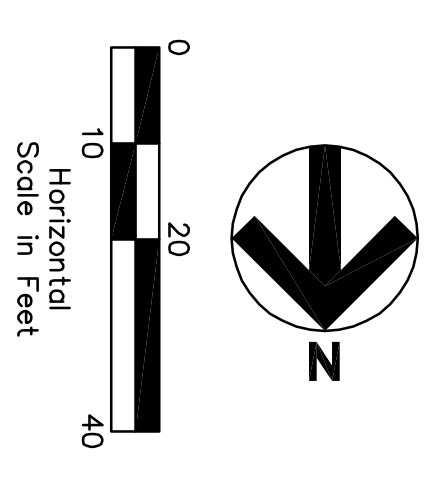
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MATCHLINE SEE SHEET SW-3

MATCHLINE SEE SHEET SW-9



- LEGEND**
- R/W** — PROJECT LIMITS
  - P/L** — ROAD CENTERLINE
  - C/L** — RIGHT OF WAY
  - P/L** — PROPERTY LINE
  - 1030** — EXISTING CONTOUR
  - — PROPOSED TREE PROTECTION FENCE LIMITS
  - — REMEDIATION GRADING LIMITS
  - — TREE CLEARING LIMITS
  - — ROCK CHECK DAM
  - ⊙** — BYPASS PUMP
  - — HAUL ACCESS ROAD/STAGING AREA
- PART 1**  
 SW-6 ANTICIPATED CONSTRUCTION SEQUENCE  
 [BYPASS PUMP #2 (SW-4) TO BYPASS PUMP #3]  
 (IN ADDITION TO GENERAL CONSTRUCTION SEQUENCE ITEMS ON SW-2)
- RF** 1. REMOVE EXISTING FENCE;
  - RRF** 1A. RELOCATE FENCE.
  - TP** 1B. INSTALL TREE PROTECTION.
  - SF** 1C. INSTALL SLIT FENCE.
  - TD** 2. INSTALL TEMPORARY CONSTRUCTION ACCESS.
  - SC** 3. INSTALL TEMPORARY STREAM CROSSING.
  - TR** 4. BEGIN TREE REMOVAL/TREE CHIPPING; COORDINATE TREE REMOVAL WITH RIVER RESTORATION TEAM PRIOR TO REMOVAL STOCKPILE IN APPROXIMATE DESIGNATED AREA.
- CG** 5. CLEAR AND GRUB WORK ZONE/FUTURE WORK ZONE AS NECESSARY; ANYTHING LESS THAN 2' DOESN'T GET CHIPPED.
- HR** 6. INSTALL POTENTIAL TEMPORARY HAUL ACCESS ROAD AND MIDDLE STAGING AREA (MAY VARY IN FIELD); THIS SEQUENCE MAY GO SIMULTANEOUS WITH SEQUENCE 4 & 5.
- GR** 7. BEGIN REMEDIATION, GRADING AND EXCAVATING THIS PLAN IS DESIGNATED ON REMOVAL STOCKPILE SOILS REMOVED SHALL BE DIRECTLY LOADED INTO CONTROLLED CONTAINMENT HAUL VEHICLES FOR TRANSPORTATION AND LEGAL DISPOSAL.
- BP** 8. MOVE ONTO SHEET SW-7 (PART 2).

- PART 4**  
 SW-6 ANTICIPATED CONSTRUCTION SEQUENCE  
 [BYPASS PUMP #3 TO BYPASS PUMP #5 (SW-9)]  
 (IN ADDITION TO GENERAL CONSTRUCTION SEQUENCE ITEMS ON SW-2)
- BP** 1. INSTALL DIKE AND BYPASS PUMP #3 & #4.
  - SF1** 1A. INSTALL SLIT FENCE.
  - TR4** 2. BEGIN TREE REMOVAL/TREE CHIPPING; COORDINATE TREE REMOVAL WITH RIVER RESTORATION TEAM PRIOR TO REMOVAL STOCKPILE IN DESIGNATED AREA.
  - CG4** 3. CLEAR AND GRUB WORK ZONE/FUTURE WORK ZONE AS NECESSARY; ANYTHING LESS THAN 2' DOESN'T GET CHIPPED.
  - GR4** 4. BEGIN REMEDIATION, GRADING AND EXCAVATING WITHIN LIMITS DESIGNATED ON THIS PLAN IS DESIGNATED ON REMOVAL STOCKPILE SOILS REMOVED SHALL BE DIRECTLY LOADED INTO CONTROLLED CONTAINMENT HAUL VEHICLES FOR TRANSPORTATION AND LEGAL DISPOSAL.
  - TR4** 5. MOVE ONTO SHEET SW-7 (PART 2).

SW-6	JOB NO.	2009213.00
	DESIGNED	DATE
	DRAWN	DATE
	CHECKED	DATE

**HALEY'S DITCH  
 REMEDIATION AND RESTORATION  
 GRADING & SWP3**

**MIDDLE WORK ZONE - STAGE 1**

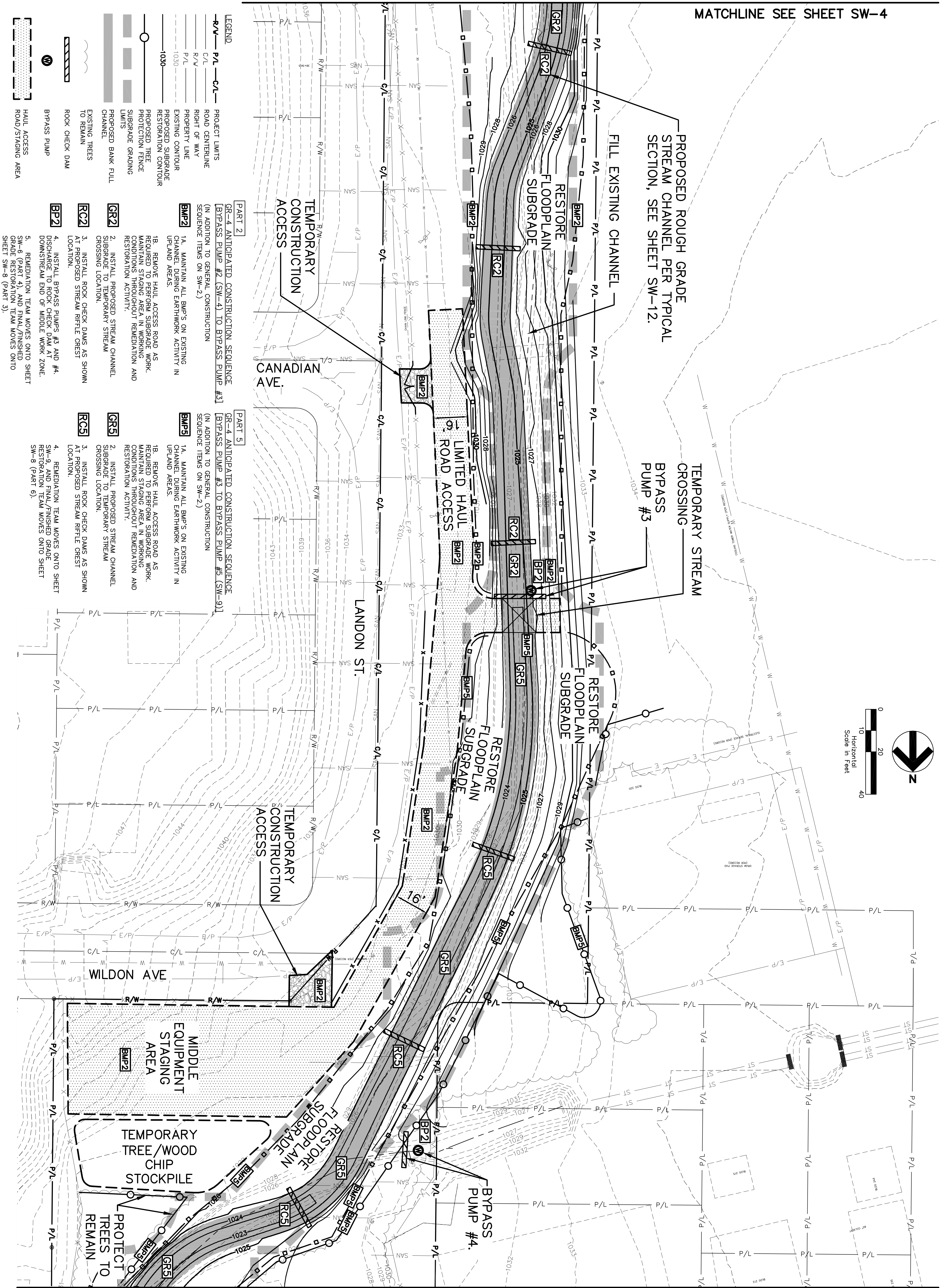
REV.	DATE	DESCRIPTION

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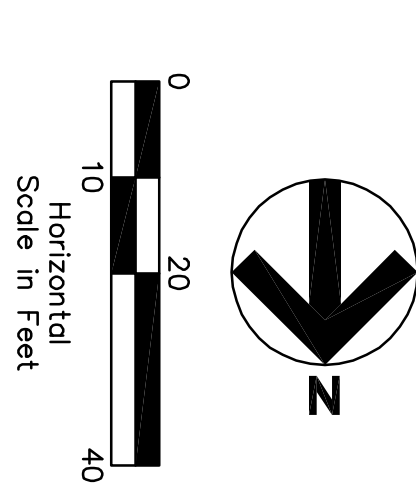
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MATCHLINE SEE SHEET SW-4

PROPOSED ROUGH GRADE  
 STREAM CHANNEL PER TYPICAL  
 SECTION, SEE SHEET SW-12.

TEMPORARY STREAM  
 CROSSING  
 BYPASS  
 PUMP #3



MATCHLINE SEE SHEET SW-10

- LEGEND**
- R/W** — PROJECT LIMITS
  - C/L** — ROAD CENTERLINE
  - P/L** — RIGHT OF WAY
  - P/L** — PROPERTY LINE
  - 1030** — EXISTING CONTOUR
  - 1030** — PROPOSED CONTOUR
  - 1030** — RESTORATION CONTOUR
  - 1030** — PROPOSED TREE PROTECTION
  - 1030** — SUBGRADE GRADING LIMITS
  - 1030** — PROPOSED BANK FULL CHANNEL
  - 1030** — EXISTING TREES TO REMAIN
  - 1030** — ROCK CHECK DAM
  - 1030** — BYPASS PUMP
  - 1030** — HAUL ACCESS ROAD/STAGING AREA

- PART 2**
- GR-4** ANTICIPATED CONSTRUCTION SEQUENCE [BYPASS PUMP #2 (SW-4) TO BYPASS PUMP #3] (IN ADDITION TO GENERAL CONSTRUCTION SEQUENCE ITEMS ON SW-2)
- BMP2**
- 1A. MAINTAIN ALL BMP'S ON EXISTING CHANNEL DURING EARTHWORK ACTIVITY IN UPLAND AREAS.
  - 1B. REMOVE HAUL ACCESS ROAD AS REQUIRED TO PERFORM SUBGRADE WORK. MAINTAIN STAGING AREA IN WORKING CONDITION THROUGHOUT REMEDIATION AND RESTORATION ACTIVITY.
  2. INSTALL PROPOSED STREAM CHANNEL SUBGRADE TO TEMPORARY STREAM CROSSING LOCATION.
  3. INSTALL ROCK CHECK DAMS AS SHOWN AT PROPOSED STREAM RIFLE CREST LOCATION.
- RC2**
- GR2**
- PART 5**
- GR-4** ANTICIPATED CONSTRUCTION SEQUENCE [BYPASS PUMP #3 TO BYPASS PUMP #5 (SW-9)] (IN ADDITION TO GENERAL CONSTRUCTION SEQUENCE ITEMS ON SW-2)
- BMP5**
- 1A. MAINTAIN ALL BMP'S ON EXISTING UPLAND AREAS.
  - 1B. REMOVE HAUL ACCESS ROAD AS REQUIRED TO PERFORM SUBGRADE WORK. MAINTAIN STAGING AREA IN WORKING CONDITION THROUGHOUT REMEDIATION AND RESTORATION ACTIVITY.
  2. INSTALL PROPOSED STREAM CHANNEL SUBGRADE TO TEMPORARY STREAM CROSSING LOCATION.
  3. INSTALL ROCK CHECK DAMS AS SHOWN AT PROPOSED STREAM RIFLE CREST LOCATION.
  4. REMEDIATION TEAM MOVES ONTO SHEET SW-6 (PART 4), AND FINAL/FINISHED GRADE RESTORATION TEAM MOVES ONTO SHEET SW-8 (PART 5).

**SW-7**

JOB NO. 2009213.00

DESIGNED	DATE
JR	4-16-09
DRAWN	DATE
MH	4-16-09
CHECKED	DATE
MAIL	4-17-09

**HALEY'S DITCH  
 REMEDIATION AND RESTORATION  
 GRADING & SWP3**

**MIDDLE WORK ZONE - STAGE 2**

REV.	DATE	DESCRIPTION

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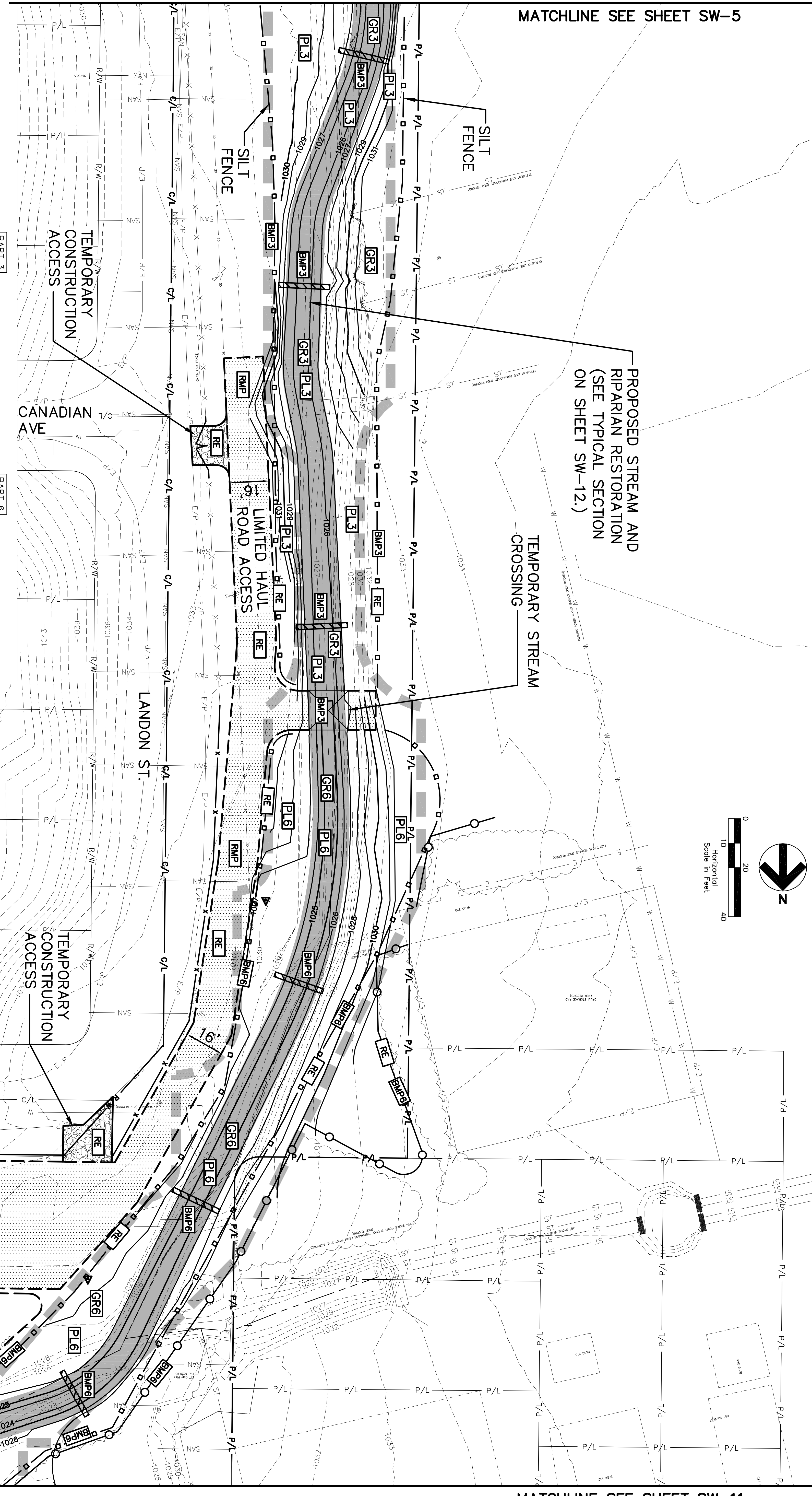
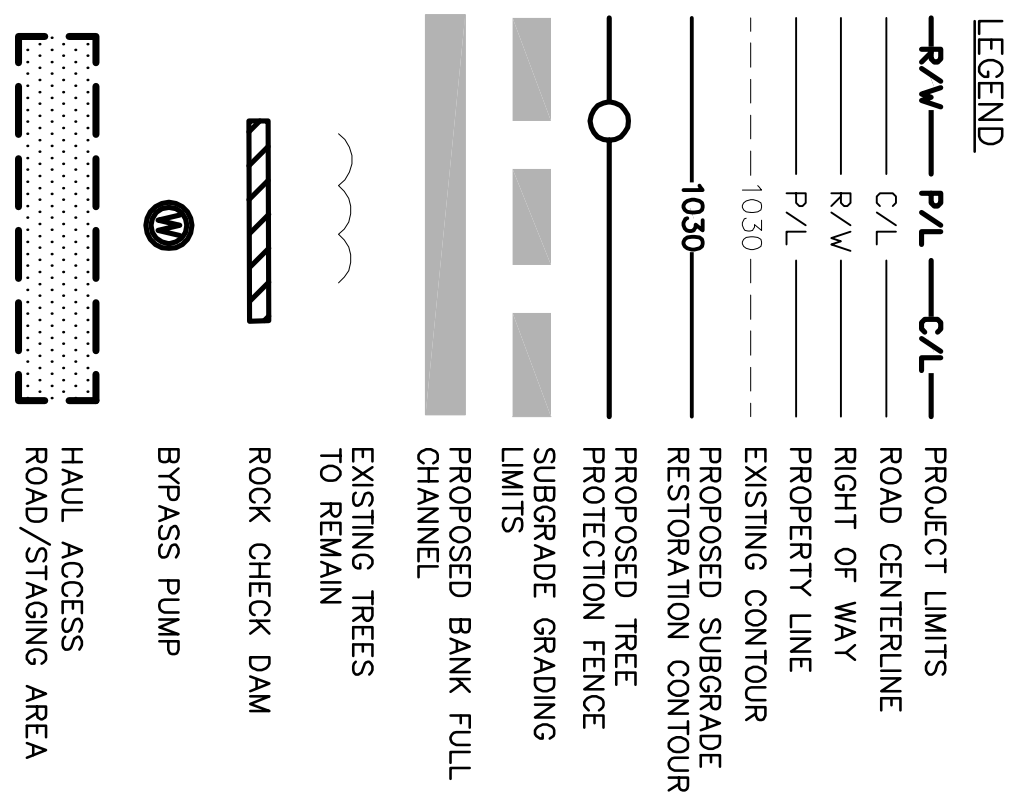
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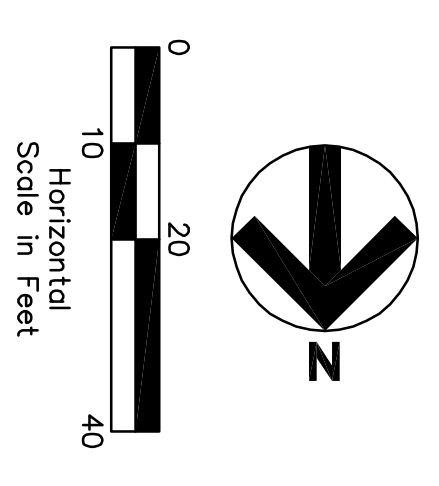




MATCHLINE SEE SHEET SW-5

PROPOSED STREAM AND RIPARIAN RESTORATION (SEE TYPICAL SECTION ON SHEET SW-12.)

TEMPORARY STREAM CROSSING



MATCHLINE SEE SHEET SW-11

**PART 3**  
 SW-8 ANTICIPATED CONSTRUCTION SEQUENCE [BYPASS PUMP #2 (SW-4) TO BYPASS PUMP #3] (SW-6-1)  
 (IN ADDITION TO GENERAL CONSTRUCTION SEQUENCE ITEMS ON SW-2.)

1. MAINTAIN ALL BMP'S ESTABLISHED ON PREVIOUS SHEETS UNTIL ITEMS REQUIRE REMOVAL FOR ADDITIONAL WORK.
2. BEGIN FINAL RESTORATION WORK. INCLUDES UTILIZING WOOD CHIP PILES AND TREE STOCKPILES.
3. PLANT NATURAL VEGETATION AND PLANTS. (INSTALL TEMPORARY SEEDING AS REQUIRED UNTIL FINAL STABILIZATION OCCURS.)
4. MOVE ONTO PART 6, THIS SHEET (FOLLOWING REMEDIATION TEAM WORK).

**PART 6**  
 SW-8 ANTICIPATED CONSTRUCTION SEQUENCE [BYPASS PUMP #3 (SW-6) TO BYPASS PUMP #5] (SW-9-1)  
 (IN ADDITION TO GENERAL CONSTRUCTION SEQUENCE ITEMS ON SW-2.)

1. MAINTAIN ALL BMP'S ESTABLISHED ON PREVIOUS SHEETS UNTIL ITEMS REQUIRE REMOVAL FOR ADDITIONAL WORK.
2. BEGIN FINAL RESTORATION WORK. INCLUDES UTILIZING WOOD CHIP PILES AND TREE STOCKPILES.
3. PLANT NATURAL VEGETATION AND PLANTS. (INSTALL TEMPORARY SEEDING AS REQUIRED UNTIL FINAL STABILIZATION OCCURS.)
4. REMOVE STAGING AREA AND ACCESS ROAD. PLANT NATURAL VEGETATION FOR ROAD. PLANT NATURAL VEGETATION FOR STABLE GROWTH.
5. REMOVE ALL TEMPORARY BMP'S UPON FINAL STABILIZATION OF SITE AREA. COORDINATE WITH NOTE #4.
6. MOVE ONTO SHEET SW-11 UPON THE REMEDIATION/SUBGRADE WORK COMPLETED.

**SW-8**

JOB NO. 2009213.00

DESIGNED	DATE
JR	4-16-09
DRAWN	DATE
MH	4-16-09
CHECKED	DATE
MAIL	4-17-09

**HALEY'S DITCH  
 REMEDIATION AND RESTORATION  
 GRADING & SWP3**

MIDDLE WORK ZONE - STAGE 3

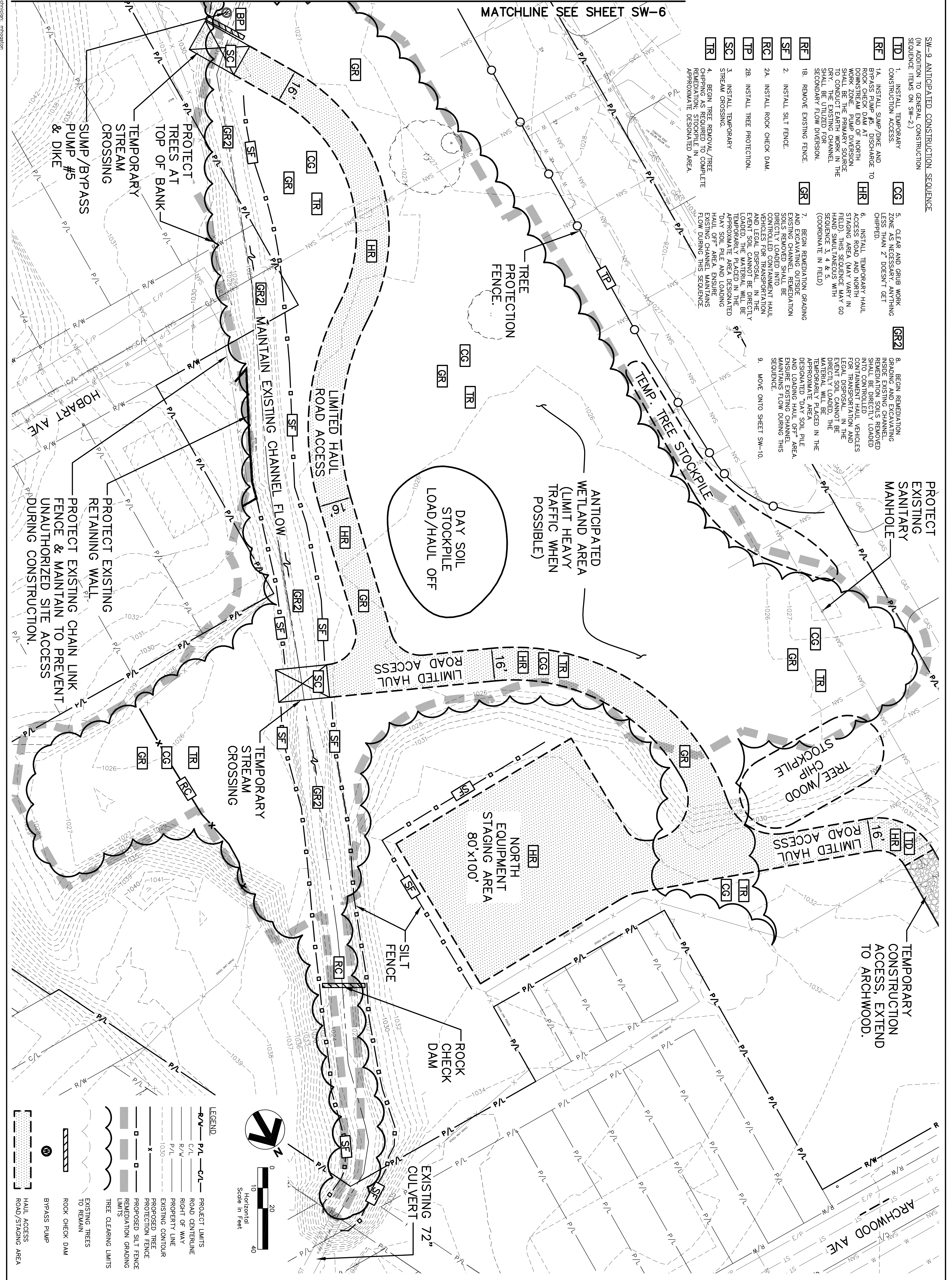
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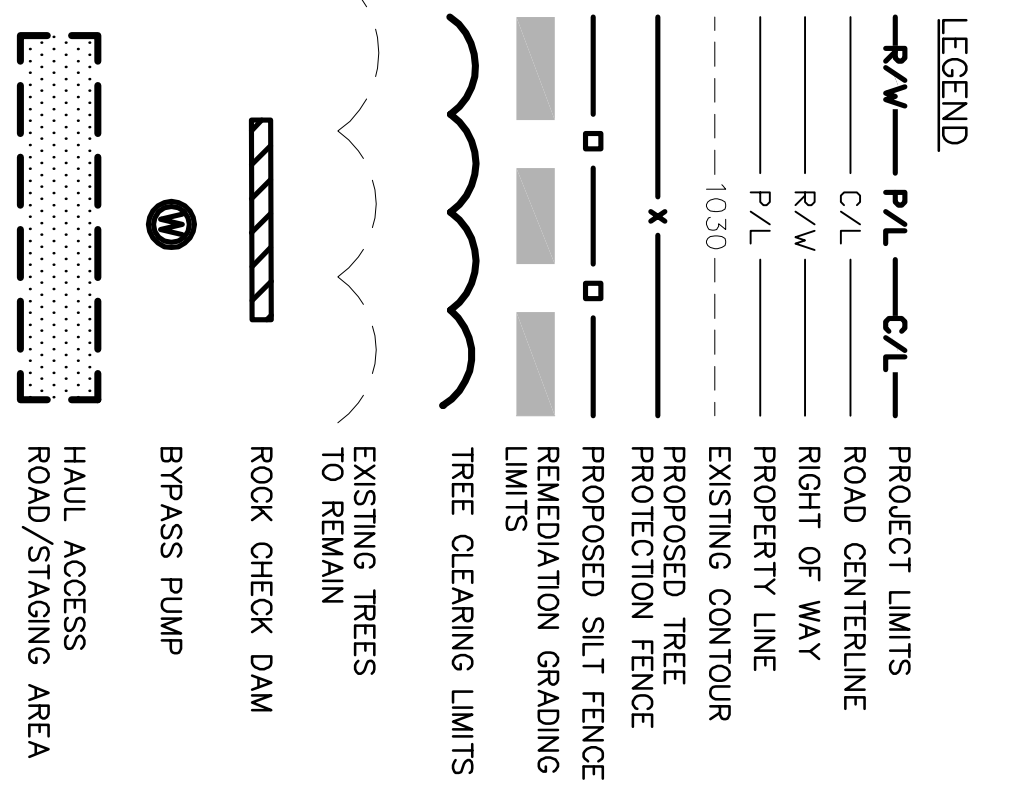
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- SW-9 ANTICIPATED CONSTRUCTION SEQUENCE**  
 (IN ADDITION TO GENERAL CONSTRUCTION SEQUENCE ITEMS ON SW-2)
- TR** 1. INSTALL TEMPORARY CONSTRUCTION ACCESS.
  - RF** 1A. INSTALL SUMP/DIKE AND BYPASS PUMP #5. DISCHARGE TO ROCK CHECK DAM AT DOWNSTREAM END OF NORTH WORK ZONE. PUMP DIVERSION TO CONDUCT EARTH WORK IN THE DRY. THE EXISTING CHANNEL SHALL BE UTILIZED FOR SECONDARY FLOW DIVERSION.
  - GR** 1B. REMOVE EXISTING FENCE.
  - SF** 2. INSTALL SILT FENCE.
  - RC** 2A. INSTALL ROCK CHECK DAM.
  - TP** 2B. INSTALL TREE PROTECTION.
  - SC** 3. INSTALL TEMPORARY STREAM CROSSING.
  - TR** 4. BEGIN TREE REMOVAL/TREE CHIPPING AS REQUIRED TO COMPLETE REMEDIATION; STOCKPILE IN APPROXIMATE DESIGNATED AREA.
  - CG** 5. CLEAR AND GRUB WORK ZONE AS NECESSARY. ANYTHING LESS THAN 2" DOESN'T GET CHIPPED.
  - HR** 6. INSTALL TEMPORARY HAUL ACCESS ROAD AND NORTH STAGING AREA (MAY VARY IN FIELD). THIS SEQUENCE MAY GO HAND SIMULTANEOUS WITH SEQUENCE 3, 4 & 5. (COORDINATE IN FIELD).
  - GR2** 7. BEGIN REMEDIATION GRADING AND EXCAVATING OUTSIDE FENCE. REMEDIATION SHALL BE DIRECTLY LOADED INTO CONTROLLED CONTAINMENT HAUL VEHICLES FOR TRANSPORTATION AND LEGAL DISPOSAL. IN THE EVENT SOIL CANNOT BE DIRECTLY LOADED, THE MATERIAL WILL BE TEMPORARILY PLACED IN THE TEMPORARILY PLACED IN THE DAY SOIL AT AREA DESIGNATED FOR SOIL STORAGE. HAUL OFF AREA ENSURE EXISTING CHANNEL MAINTAINS FLOW DURING THIS SEQUENCE.
  - GR2** 8. BEGIN REMEDIATION GRADING AND EXCAVATING INSIDE EXISTING CHANNEL. REMEDIATION SOILS REMOVED SHALL BE DIRECTLY LOADED INTO CONTROLLED CONTAINMENT HAUL VEHICLES FOR TRANSPORTATION AND LEGAL DISPOSAL. IN THE EVENT DISPOSAL IN THE FIELD IS NECESSARY, THE MATERIAL WILL BE TEMPORARILY PLACED IN THE APPROXIMATE AREA DESIGNATED "DAY SOIL PILE AND LOADING HAUL OFF" AREA. ENSURE EXISTING CHANNEL MAINTAINS FLOW DURING THIS SEQUENCE.
  - GR2** 9. MOVE ONTO SHEET SW-10.



**SW-9**

JOB NO.  
**2009213.00**

DESIGNED	DATE
JR	4-16-09
DRAWN	DATE
MJH	4-16-09
CHECKED	DATE
MAIL	4-17-09

**HALEY'S DITCH  
 REMEDIATION AND RESTORATION  
 GRADING & SWP3**

**NORTH WORK ZONE - STAGE 1**

REV.	DATE	DESCRIPTION

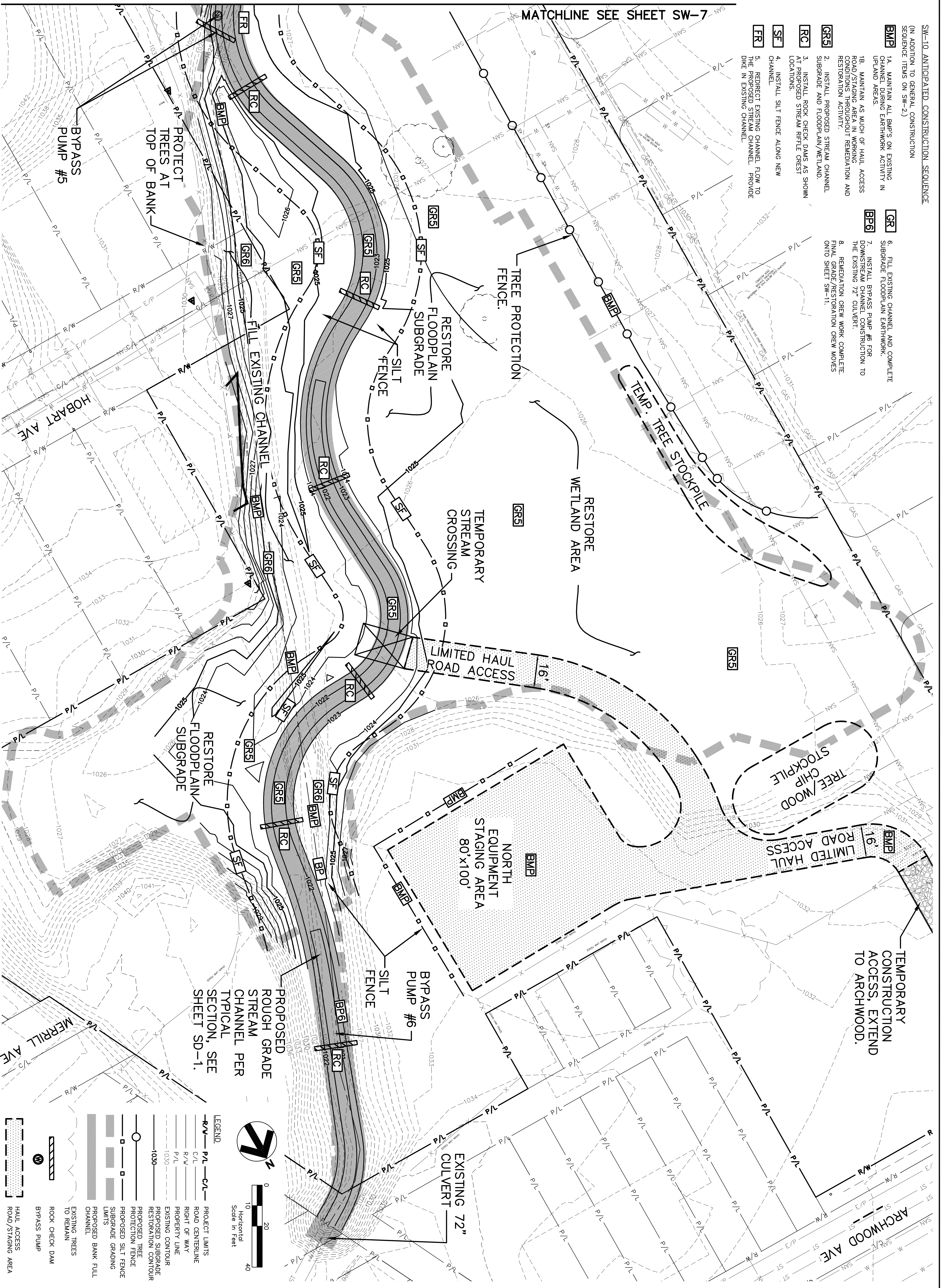
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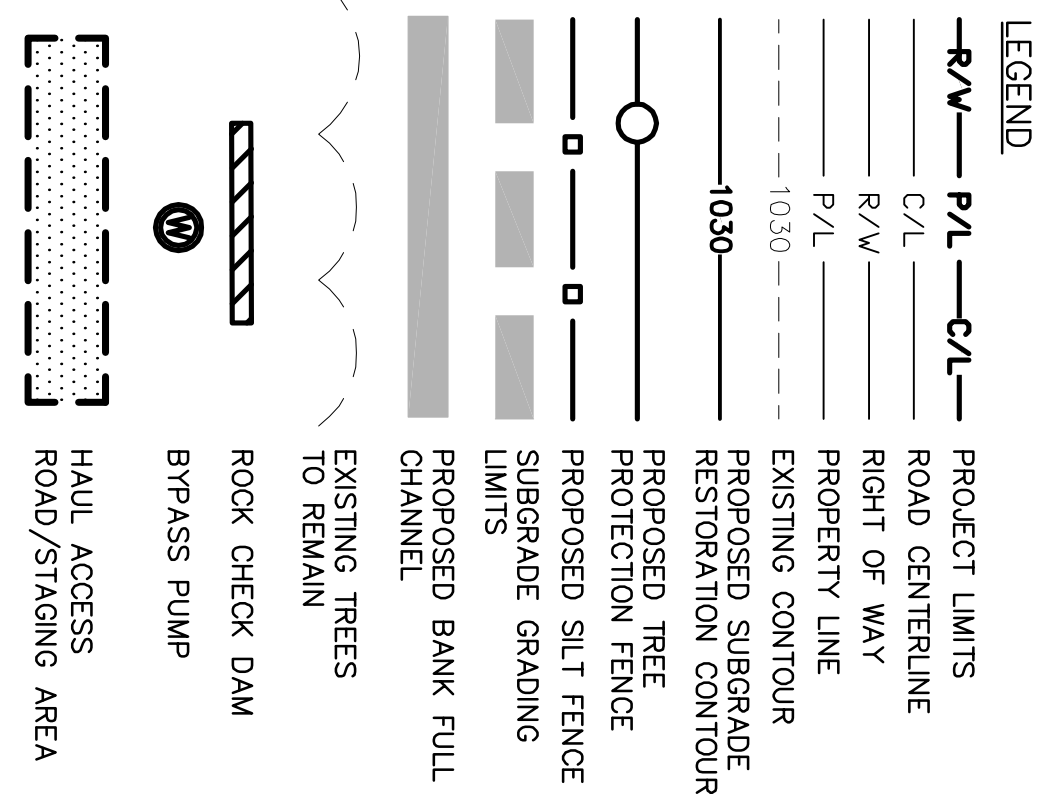
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Environment - Emulsion



- SW-10 ANTICIPATED CONSTRUCTION SEQUENCE  
 (IN ADDITION TO GENERAL CONSTRUCTION SEQUENCE ITEMS ON SW-2)
- BMP** 1A. MAINTAIN ALL BMPs ON EXISTING CHANNEL DURING EARTHWORK ACTIVITY IN UPLAND AREAS.
  - BMP** 1B. MAINTAIN AS MUCH OF HAUL ACCESS ROAD/STAGING AREA IN WORKING CONDITIONS THROUGHOUT REMEDIATION AND RESTORATION ACTIVITY.
  - GR5** 2. INSTALL PROPOSED STREAM CHANNEL SUBGRADE AND FLOODPLAIN/WETLAND.
  - RC** 3. INSTALL ROCK CHECK DAMS AS SHOWN AT PROPOSED STREAM RIFLE CREST LOCATIONS.
  - SF** 4. INSTALL SILT FENCE ALONG NEW CHANNEL.
  - FR** 5. REDIRECT EXISTING CHANNEL FLOW TO THE PROPOSED STREAM CHANNEL. PROVIDE DIKE IN EXISTING CHANNEL.
  - GR** 6. FILL EXISTING CHANNEL AND COMPLETE SUBGRADE FLOODPLAIN EARTHWORK.
  - BP6** 7. INSTALL BYPASS PUMP #6 FOR DOWNSTREAM CHANNEL CONSTRUCTION TO THE EXISTING 72" CULVERT.
  - GR5** 8. REMEDIATION CREW WORK COMPLETE. FINAL GRADE/RESTORATION CREW MOVES ON TO SHEET SW-11.



**SW-10**

JOB NO. 2009213.00

DESIGNED	DATE
JR	4-16-09
DRAWN	DATE
MJM	4-16-09
CHECKED	DATE
MAIL	4-17-09

**HALEY'S DITCH**  
 REMEDIATION AND RESTORATION  
 GRADING & SWP3

**NORTH WORK ZONE - STAGE 2**

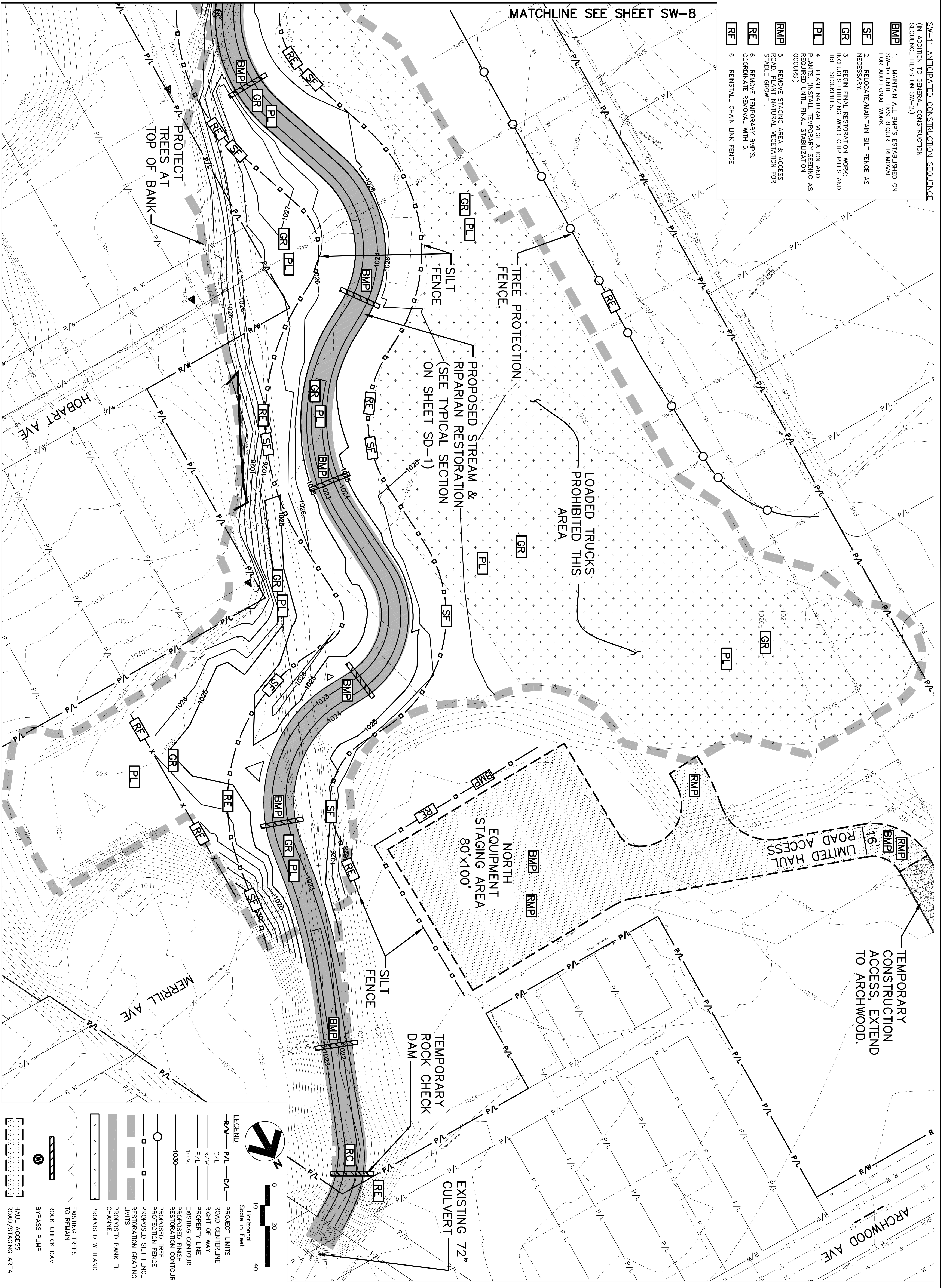
REV.	DATE	DESCRIPTION

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- SW-11 ANTICIPATED CONSTRUCTION SEQUENCE  
 (IN ADDITION TO GENERAL CONSTRUCTION SEQUENCE ITEMS ON SW-2)
- BMP** 1. MAINTAIN ALL BMP'S ESTABLISHED ON SW-10 UNTIL ITEMS REQUIRE REMOVAL FOR ADDITIONAL WORK.
  - SE** 2. RELOCATE/MAINTAIN SILT FENCE AS NECESSARY.
  - GR** 3. BEGIN FINAL RESTORATION WORK AND INCLUDE UTILIZING WOOD CHIP PILES AND TREE STOCKPILES.
  - PL** 4. PLANT NATURAL VEGETATION AND PLANTS. (INSTALL TEMPORARY SEEDING AS REQUIRED UNTIL FINAL STABILIZATION OCCURS)
  - RMP** 5. REMOVE STAGING AREA & ACCESS ROAD. PLANT NATURAL VEGETATION FOR STABLE GROWTH.
  - RE** 6. REMOVE TEMPORARY BMP'S.
  - RE** 6. COORDINATE REMOVAL WITH S.
  - RE** 6. REINSTALL CHAIN LINK FENCE.

**LEGEND**  
 Scale in Feet

- R/W - PROJECT LIMITS
- C/L - ROAD CENTERLINE
- R/W - RIGHT OF WAY
- P/L - PROPERTY LINE
- 1030 - EXISTING CONTOUR
- 1030 - PROPOSED FINISH RESTORATION CONTOUR
- PROPOSED TREE PROTECTION FENCE
- PROPOSED SILT FENCE
- RESTORATION GRADING LIMITS
- PROPOSED BANK FULL CHANNEL
- PROPOSED WETLAND
- EXISTING TREES TO REMAIN
- ROCK CHECK DAM
- BYPASS PUMP
- HAUL ACCESS ROAD/STAGING AREA

**SW-11**

JOB NO.  
**2009213.00**

DESIGNED	DATE
JR	4-16-09
DRAWN	DATE
MJH	4-16-09
CHECKED	DATE
MAIL	4-17-09

**HALEY'S DITCH  
 REMEDIATION AND RESTORATION  
 GRADING & SWP3**

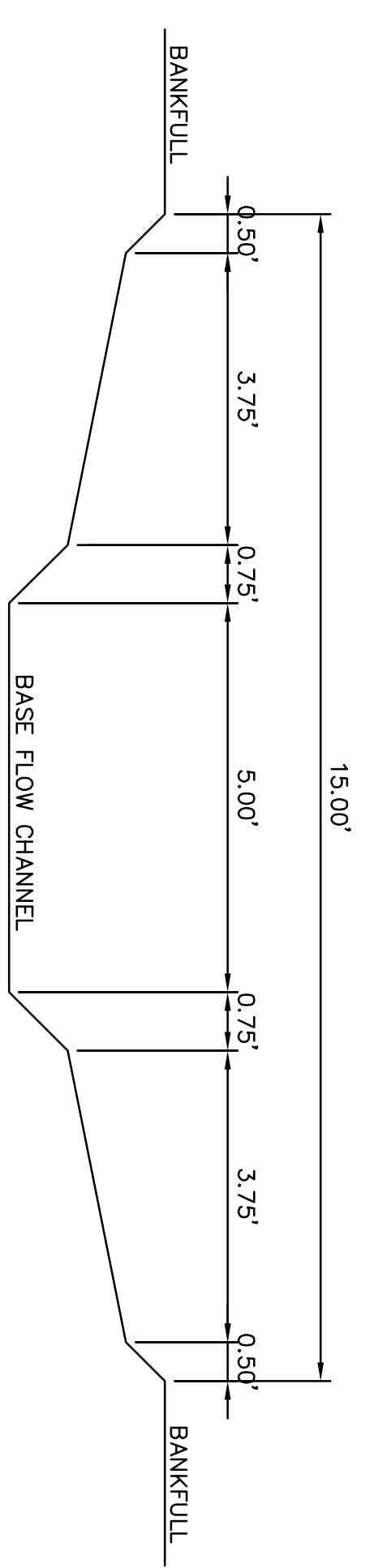
**NORTH WORK ZONE - STAGE 3**

REV.	DATE	DESCRIPTION

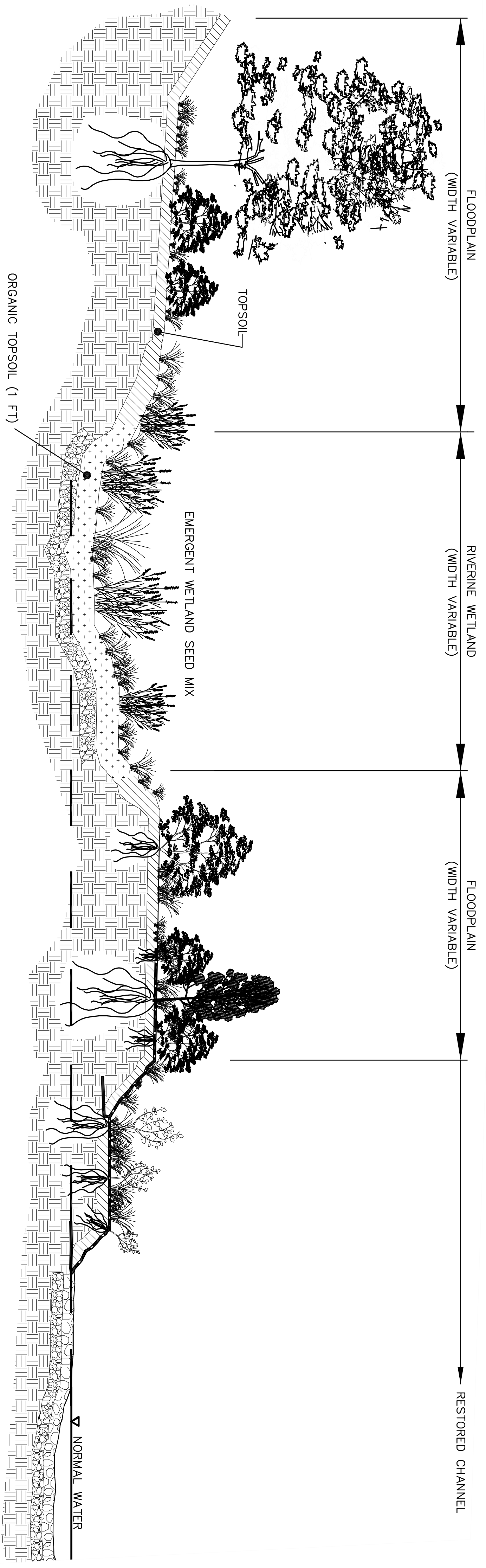
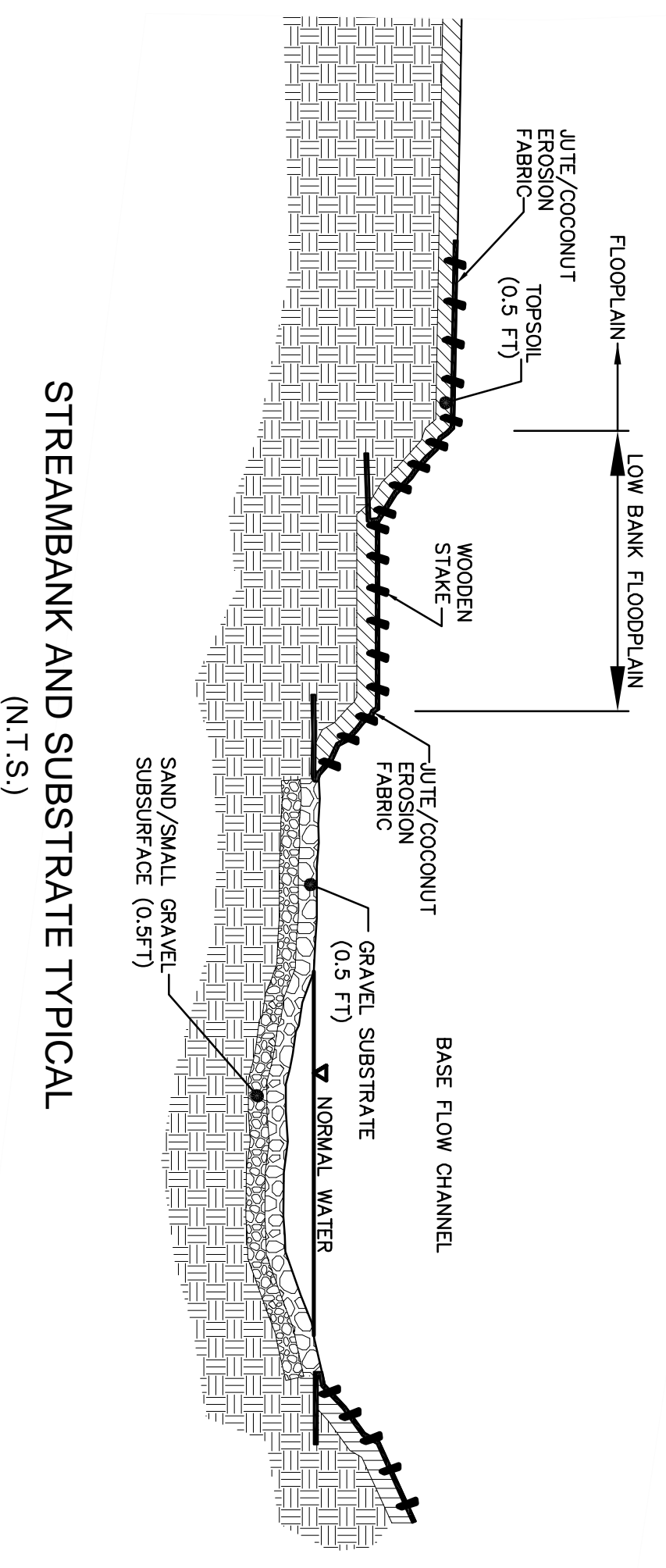
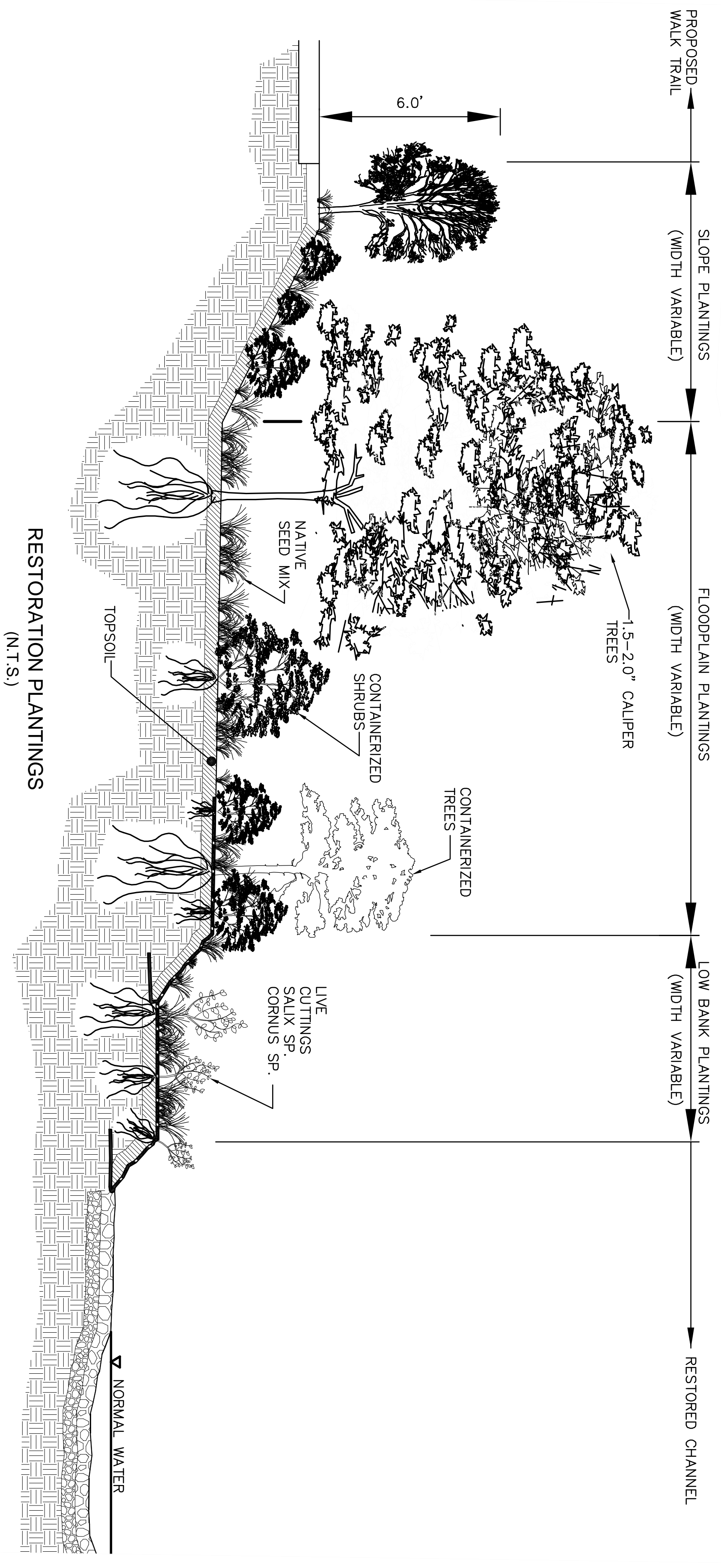
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 330-572-2100, Fax 330-572-2101



Technician: emhanson



**NOTE:**  
 ROCK CHECK DAMS PLACED PER PLAN.  
**ROUGH GRADE BANK FULL CHANNEL TYPICAL SECTION**  
 N.T.S.



**STREAM & RIPARIAN RESTORATION TYPICAL SECTION**  
 N.T.S.

REV.	DATE	DESCRIPTION

**HALEY'S DITCH  
 REMEDIATION AND RESTORATION  
 GRADING & SWP3**

**SITE DETAILS**

DESIGNED	DATE
JR	4-16-09
DRAWN	DATE
MJH	4-16-09
CHECKED	DATE
MAL	4-17-09

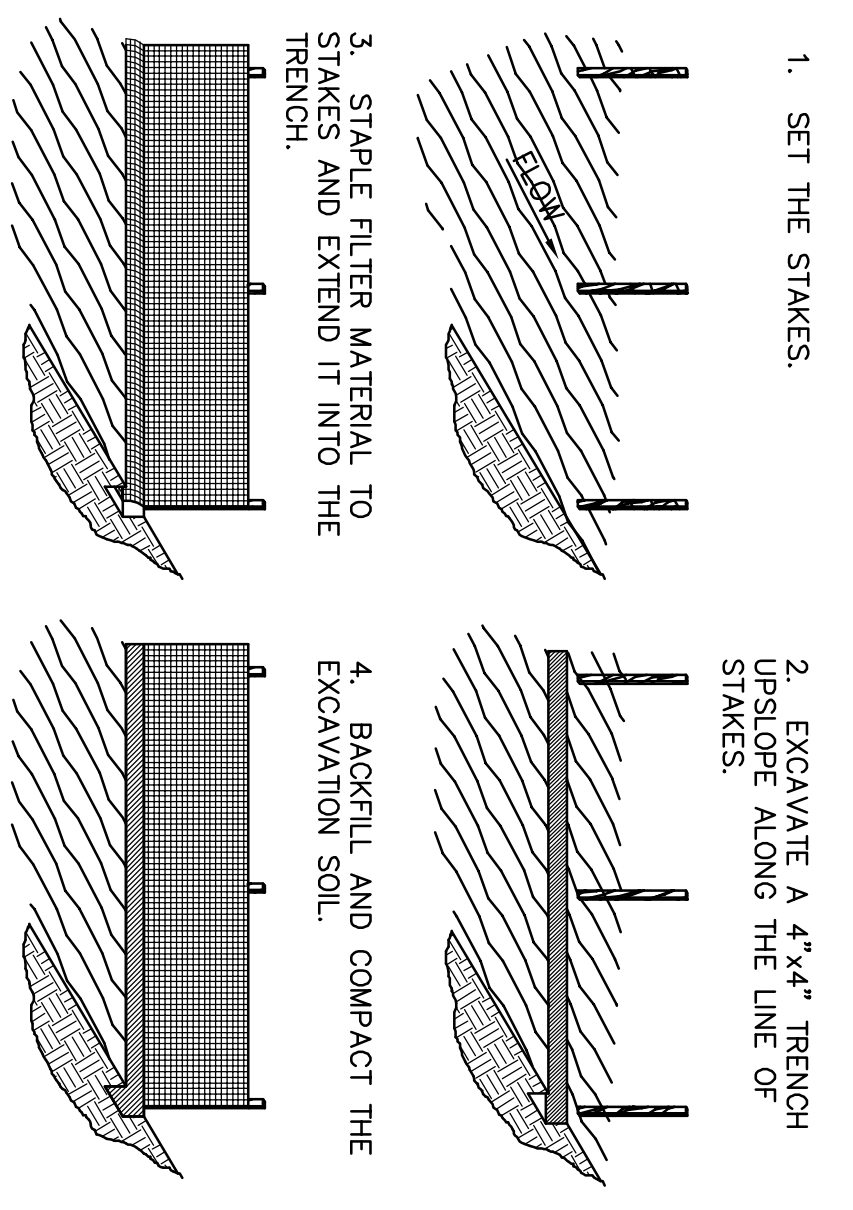
JOB NO.  
**2009213.00**

**SW-12**

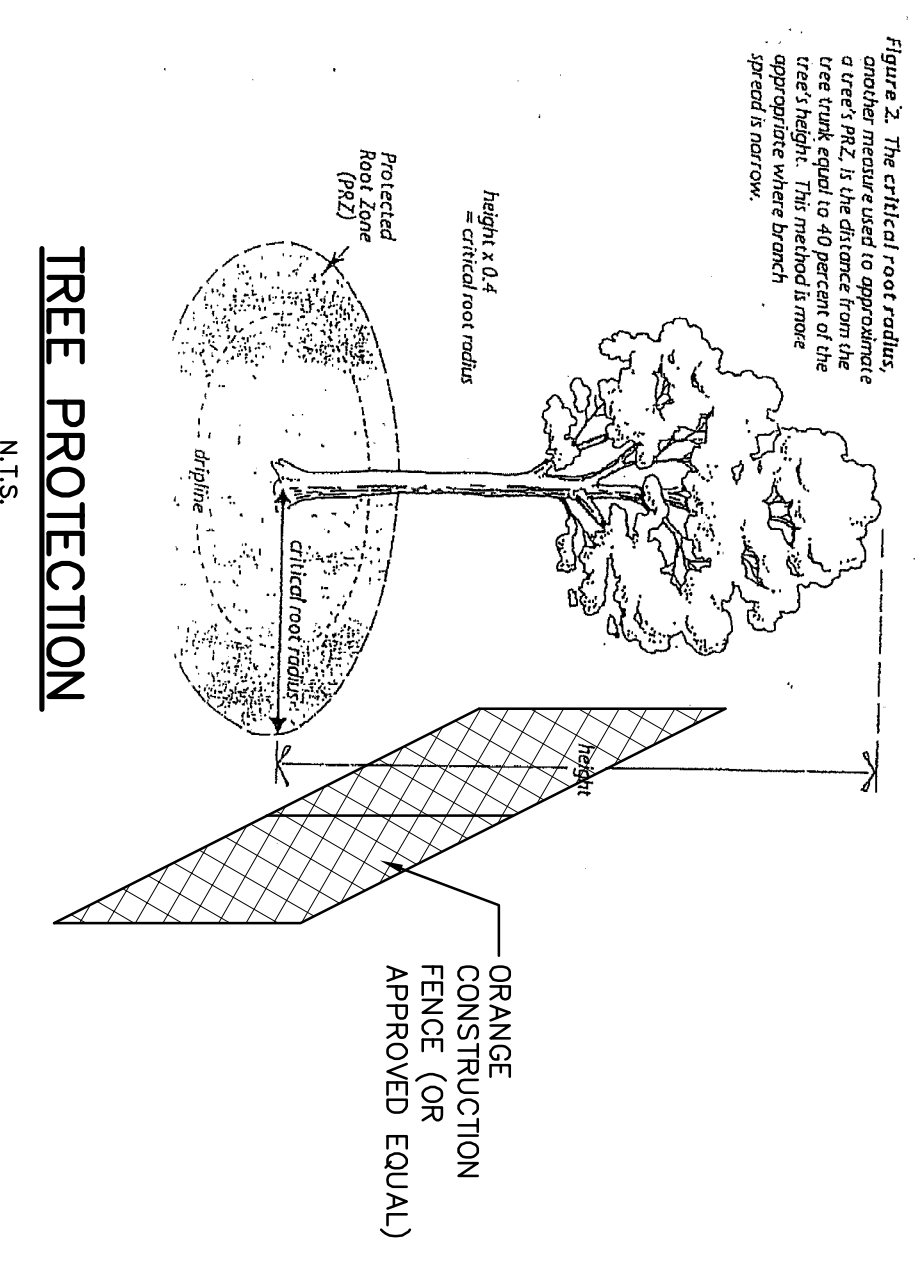
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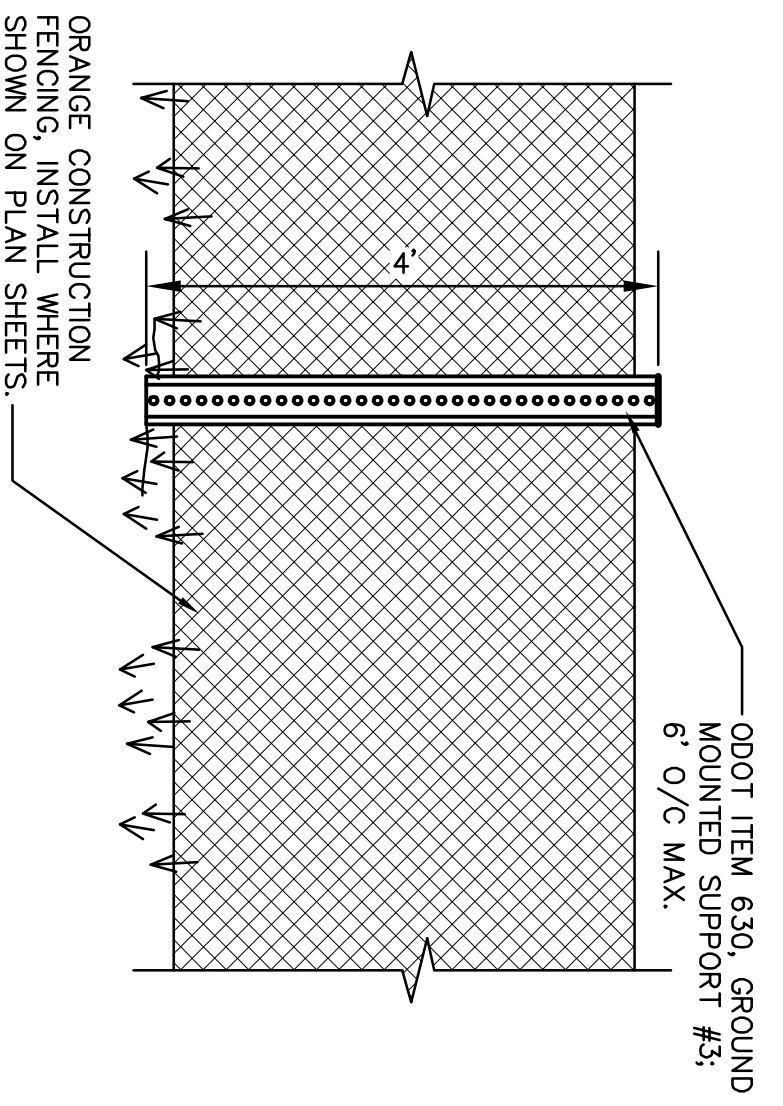
Technician: emhaston



**SILT FENCE**  
N.T.S.

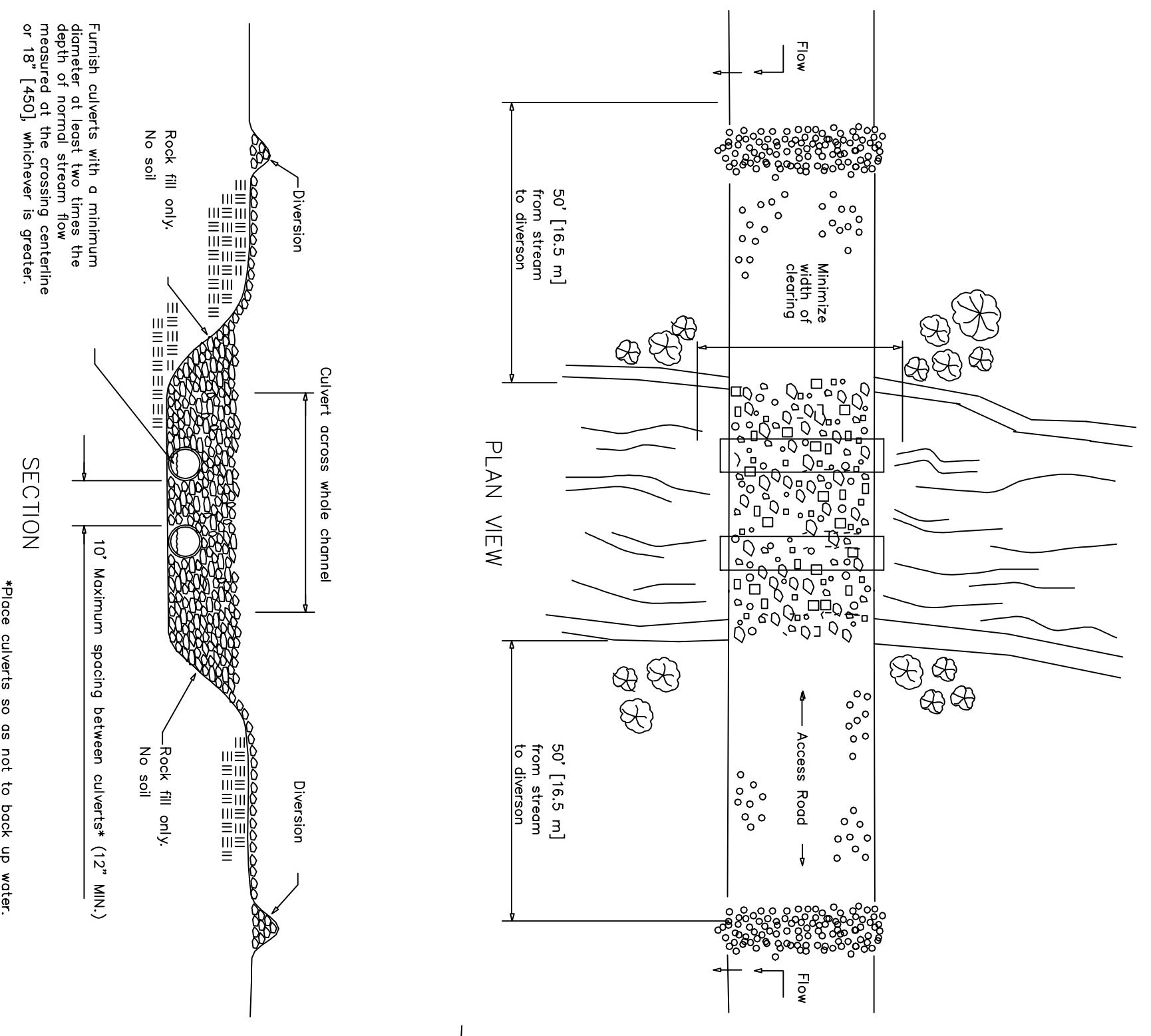


**TREE PROTECTION**  
N.T.S.



**ORANGE CONSTRUCTION FENCING**  
NOT TO SCALE

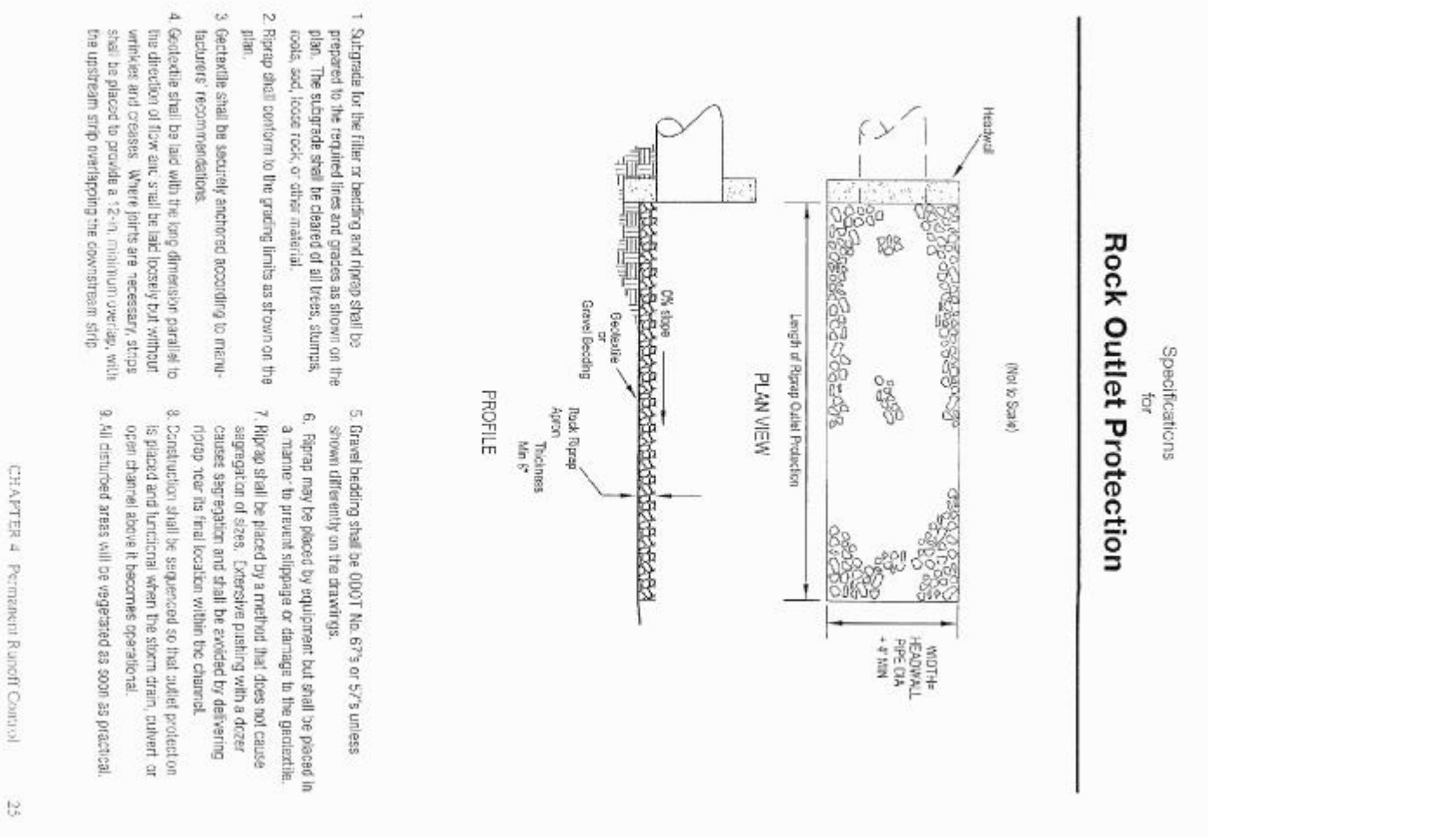
NOTE: CONTRACTOR SHALL REMOVE FENCING & POSTS PRIOR TO FINAL ACCEPTANCE.



**NOTES**

MATERIAL: Furnish dumped rock fill conforming to CMS 703.19(B), Type B, C, or D.  
 CONSTRUCTION: Comply with CMS 107.19 and construct as per CMS 207.03.B.8.b.  
 The number of culverts needed will vary with the width of the crossing and the size of the culverts.  
 PAVEMENT: As per CMS 207.07, the Department will not pay for Stream Crossing Work.

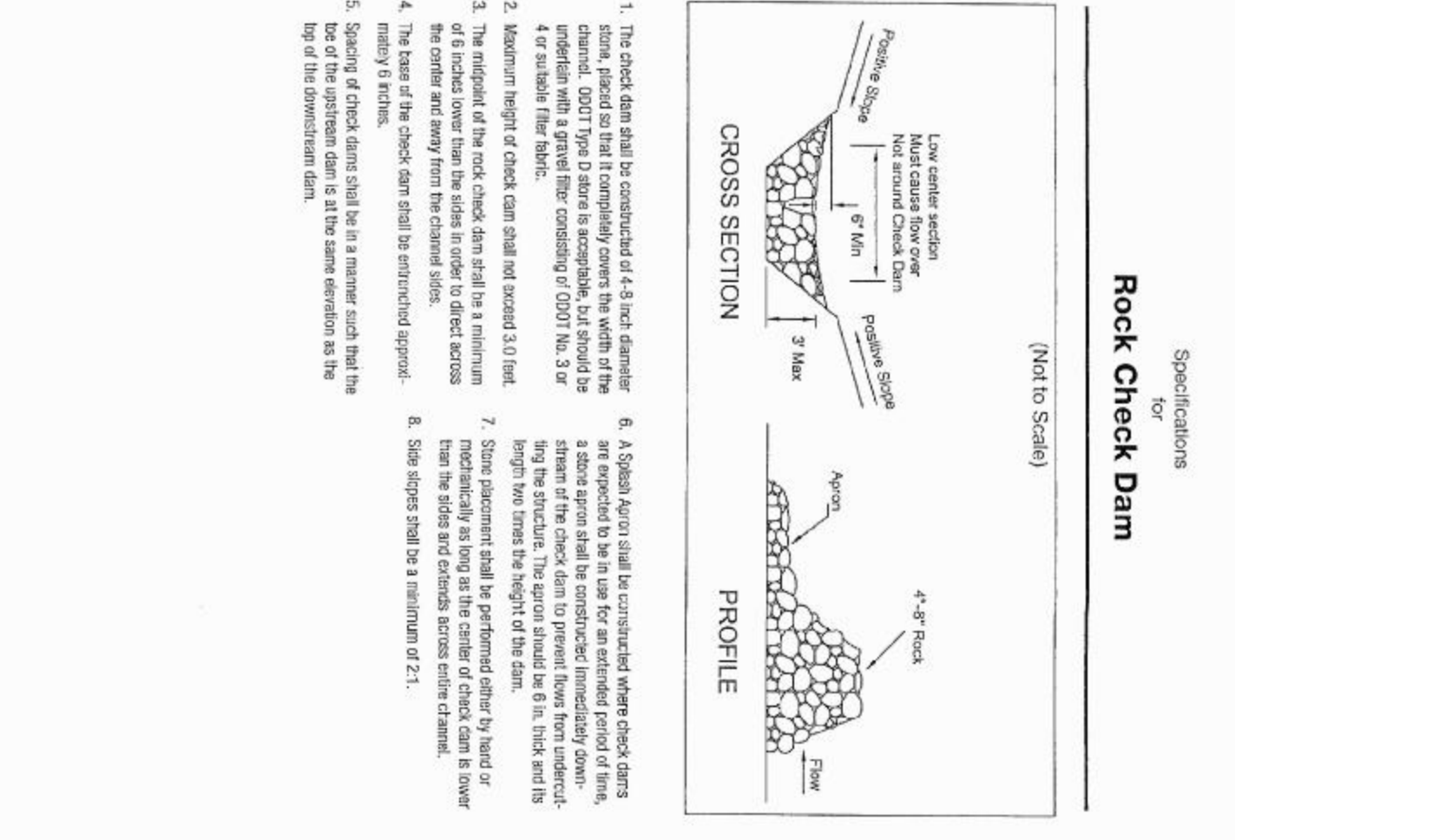
DATE	7-19-02	OHIO DEPARTMENT OF TRANSPORTATION ENGINEER OF BRIDGES
HYDRAULIC ENGINEER	D. Gruver	
Office of Structural Engineering		
STANDARD HYDRAULIC CONSTRUCTION DRAWING		
STREAM AND RIVER CROSSINGS		
NUMBER	DM-5.1	
	1 / 1	



**Rock Outlet Protection**  
Specifications for

CHAPTER 4 - Temporary Road/Culvert

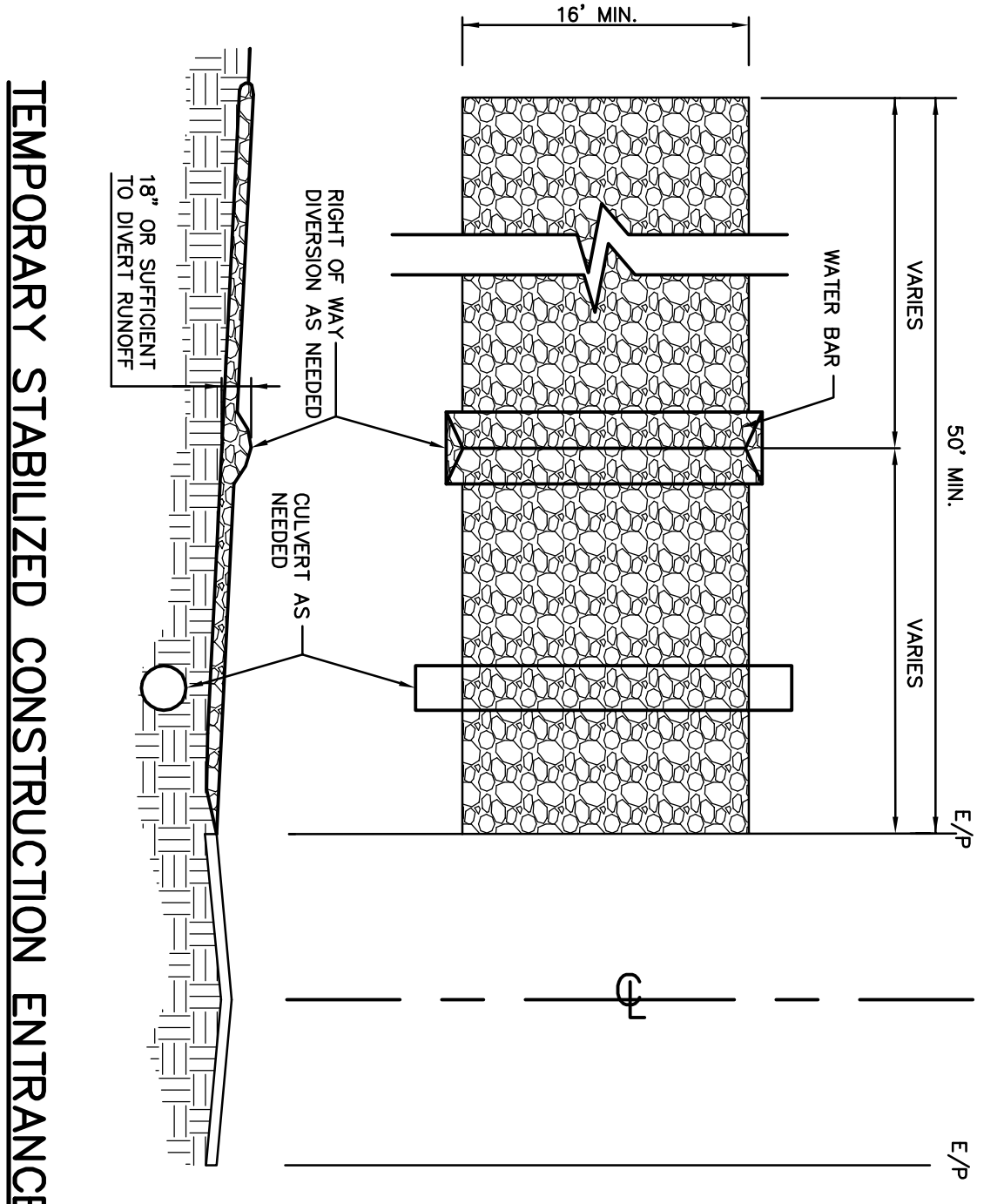
1. Outlets for the filter or sanding and fines shall be provided to the outlet filter and gates as shown on the plan. The outlet shall be a minimum of 18\"/>



**Rock Check Dam**  
Specifications for

CHAPTER 3 - Temporary Road/Culvert

1. The check dam shall be constructed of 4 to 6 inch diameter stone. A 30 degree apron shall be constructed where check dams are used. The apron shall be constructed of 1/2 inch diameter stone. The apron shall be constructed of 1/2 inch diameter stone. The apron shall be constructed of 1/2 inch diameter stone.



**TEMPORARY STABILIZED CONSTRUCTION ENTRANCE**  
N.T.S.

**NOTES**

1. STONE SIZE - NO. 2 STONE SHALL BE USED, OR RECYCLED CONCRETE EQUIVALENT.
2. EQUIPMENT ENTRANCE SHALL COINCIDE WITH THE PROPOSED DRIVE AS SHOWN ON THE PLAN.
3. THICKNESS - STONE LAYER SHALL BE 6\"/>

REV.	DATE	DESCRIPTION

**HALEY'S DITCH  
REMEDATION AND RESTORATION  
GRADING & SWP3**

**SITE DETAILS**

DESIGNED	DATE
JR	4-16-09
DRAWN	DATE
MLH	4-16-09
CHECKED	DATE
MLL	4-17-09

JOB NO.  
**2009213.00**

**SW-13**

GLAUS PFEIL SCHWABER BURKE & DEWITT INC.  
**GPD ASSOCIATES**  
 520 South Main Street, Suite 2531  
 Akron, Ohio 44311  
 330-572-2100 • Fax 330-572-2101

