

**Meeting of the Central Valley Flood Protection Board  
March 23, 2012  
Staff Report – Encroachment Permit  
Lodi Unified School District  
Storm water Pump Station Outfall System, San Joaquin County**

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**1.0 – ITEM**

Consider approval of Permit No. 18700 (Attachment B)

**2.0 – APPLICANT**

Lodi Unified School District

**3.0 – LOCATION**

The project is located at 9820 North Ronald McNair Way, on the left (south) bank of Bear Creek.

(San Joaquin River, San Joaquin County, see Attachment A)

**4.0 – DESCRIPTION**

Applicant proposes to construct a storm water pump station outfall system consisting of 1) three 24 inch and one twelve inch steel discharge pipes 2) approximately 0.37 acres (1612 sq. ft.) of non-grouted, facing class rock slope protection: and 3) a float sensor to stop the pumps when Bear Creek exceeds its design capacity.

**5.0 – PROJECT ANALYSIS**

The proposed project conforms to Sections 120 and 123 of Title 23. The installation of the piping through the levee, the placement of the outfall, rock slope protection and float sensor (placed on the overflow berm) have been designed to minimize impacts to the Bear Creek floodway to an insignificant impact.

## **5.1 – Hydraulic Analysis**

A flowage block calculation was performed that showed less than 1% blockage. The project is designed to have a maximum outfall of 58 cfs, which is the peak 10-year storm discharge. When Corps design water surface elevation is reached in Bear Creek the pump station is designed to stop pumping. Based on this information it will have an insignificant water surface elevation rise at the 100-year-design event.

## **5.2 – Geotechnical Analysis**

A seepage analysis was performed which showed that the levee section has an exit gradient of less than 0.5 which conforms to standards set by USACE and FEMA geotechnical requirements for seepage. Because the levee fill is composed mostly of clay, through seepage is not considered a concern. The low calculated exit gradients are consistent with the reported low head conditions and lack of seepage issues along the subject levee.

## **6.0 – AGENCY COMMENTS AND ENDORSEMENTS**

The comments and endorsements associated with this project, from all pertinent agencies are shown below:

The San Joaquin County Flood Control & Water Conservation District has endorsed this project in a letter dated September 23, 2011, which is attached to the permit as Exhibit A and is incorporated by reference.

The U. S. Army Corps of Engineers 208.10 comment letter has not been received for this application. Staff anticipates receipt of a letter indicating that the USACE District Engineer has no objection to the project, subject to conditions. Upon receipt of the letter, staff will review to ensure conformity with the permit language and incorporate it into the permit as Exhibit B.

## **7.0 – CEQA ANALYSIS**

Board staff has prepared the following CEQA findings:

The Board, as a responsible agency under CEQA, has reviewed Initial Study/Mitigated

Negative Declaration (IS/MND) (SCH Number: 2004062118, June 2004) and Mitigation Measures for the Lodi Unified Fourth High School Storm Drainage Pump Station, Outfall and Bike Path Project prepared by the lead agency, Lodi Unified School District. These documents, including project design, may be viewed or downloaded from the Central Valley Flood Protection Board website at <http://www.cvpfb.ca.gov/meetings/2012/03-23-2012.cfm> under a link for this agenda item. These documents are also available for review in hard copy at the Board and the Lodi Unified School District offices.

Lodi Unified School District has determined that the project would not have a significant effect on the environment at the Lodi Unified School District Board of Trustees Meeting on August 3, 2004 and filed a Notice of Determination on August 16, 2004 with the State Clearinghouse. Board staff finds that although the proposed project could have a potentially significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. The project proponent has incorporated mandatory mitigation measures into the project plans to avoid identified impacts or to mitigate such impacts to a point where no significant impacts will occur. These mitigation measures are included in the project proponent's IS/MND and address impacts to air quality, biological resources, cultural resources, hazards and hazardous materials, hydrology and water quality, utilities and service systems. The description of the mitigation measures are further described in the adopted IS/MND.

### **8.0 – SECTION 8610.5 CONSIDERATIONS**

1. Evidence that the Board admits into its record from any party, State or local public agency, or nongovernmental organization with expertise in flood or flood plain management:

The Board will make its decision based on the evidence in the permit application and attachments, this staff report, and any other evidence presented by any individual or group.

2. The best available science that related to the scientific issues presented by the executive officer, legal counsel, the Department or other parties that raise credible scientific issues.

The accepted industry standards for the work proposed under this permit as regulated by Title 23 have been applied to the review of this permit.

3. Effects of the decision on the entire State Plan of Flood Control:

The proposed project will have insignificant effects on the entire State Plan of Flood Control.

4. Effects of reasonable projected future events, including, but not limited to, changes in hydrology, climate, and development within the applicable watershed:

Effects from reasonable projected future events to the proposed project will be negligible.

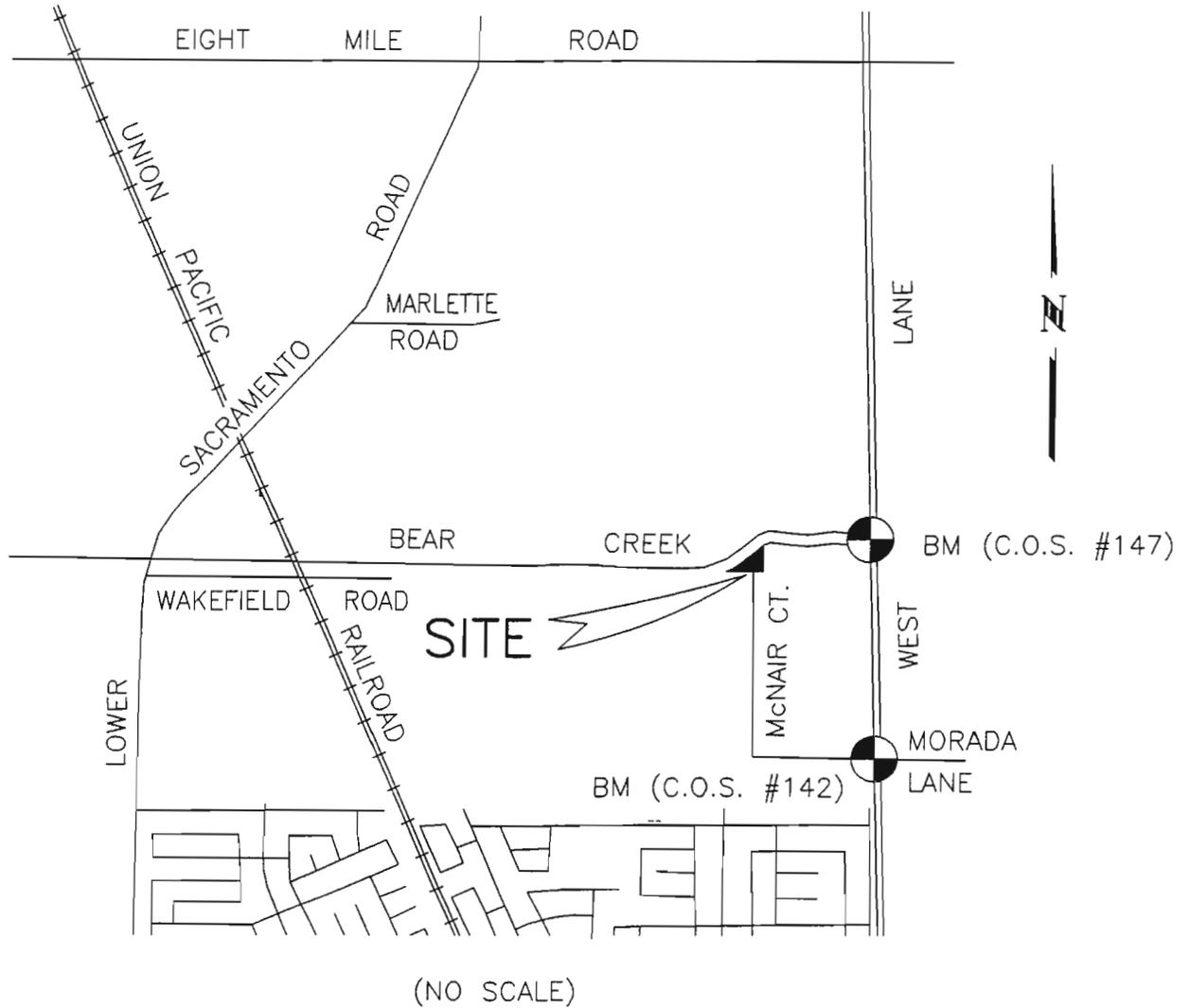
### **9.0 – STAFF RECOMMENDATION**

Staff recommends that the Board adopt the CEQA findings and approve the permit, conditioned upon receipt of a U. S. Army Corps of Engineers comment letter indicating that the District Engineer has no objection to the project, subject to conditions, and direct staff to file a Notice of Determination with the State Clearinghouse.

### **10.0 – LIST OF ATTACHMENTS**

- A. Location Maps and Photos
- B. Draft Permit No. 18700
- C. Expanded Description and Drawings

|                       |                               |
|-----------------------|-------------------------------|
| Design Review:        | Steve Dawson                  |
| Hydraulic Review:     | Steve Dawson                  |
| Geotechnical Review:  | Steve Dawson                  |
| Environmental Review: | James Herota and Andrea Mauro |
| Document Review:      | Mitra Emami and Len Mario     |



| NO.                 | REV. DATE | BY | APRVD. |
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**McNAIR HIGH SCHOOL  
VICINITY MAP**

APPROVED BY: \_\_\_\_\_

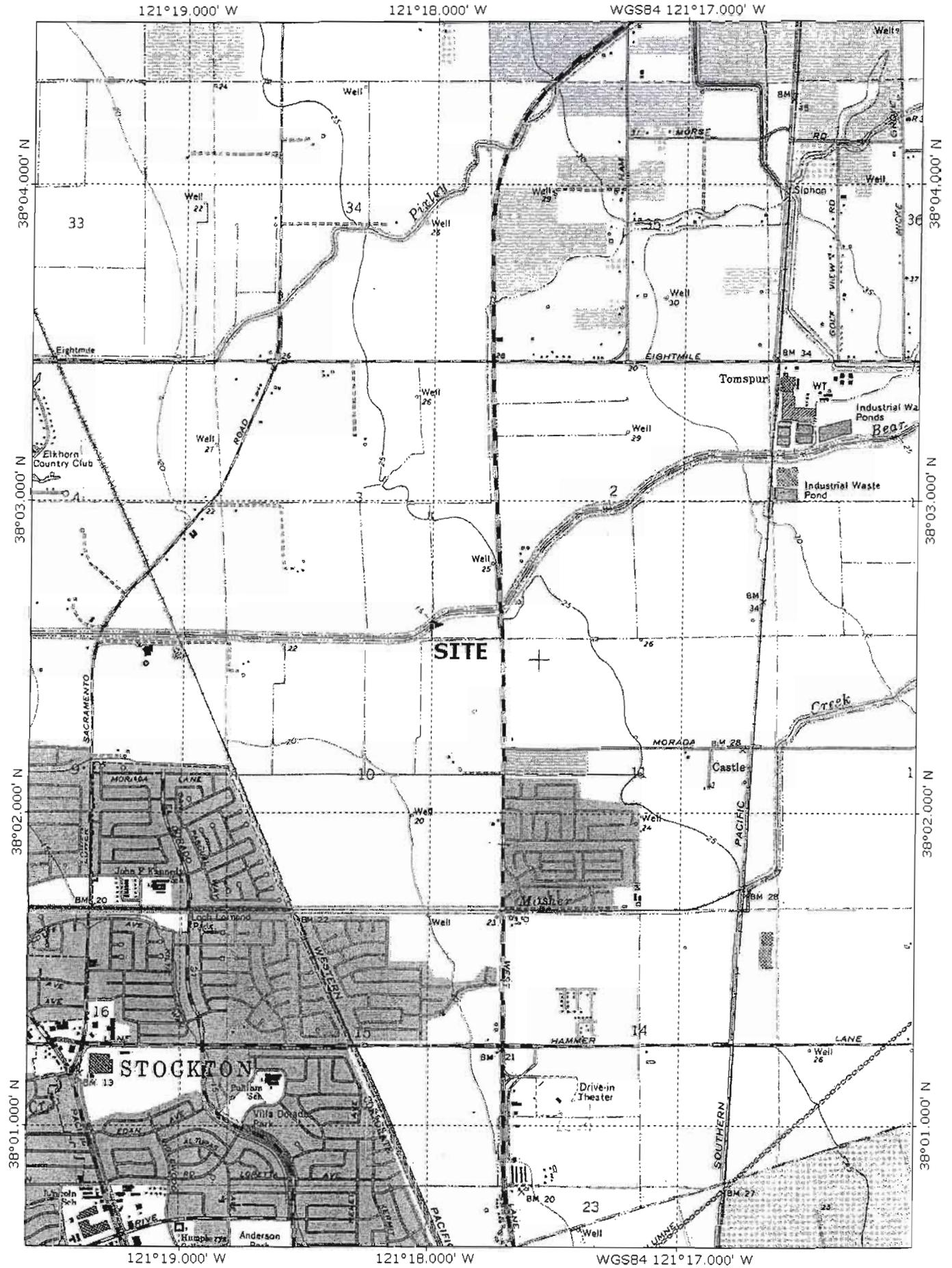


**A.R. SANGUINETTI & ASSOCIATES**  
CONSULTING CIVIL ENGINEERS

DATE  
08-2005

DRAWING NO.  
1 OF 1

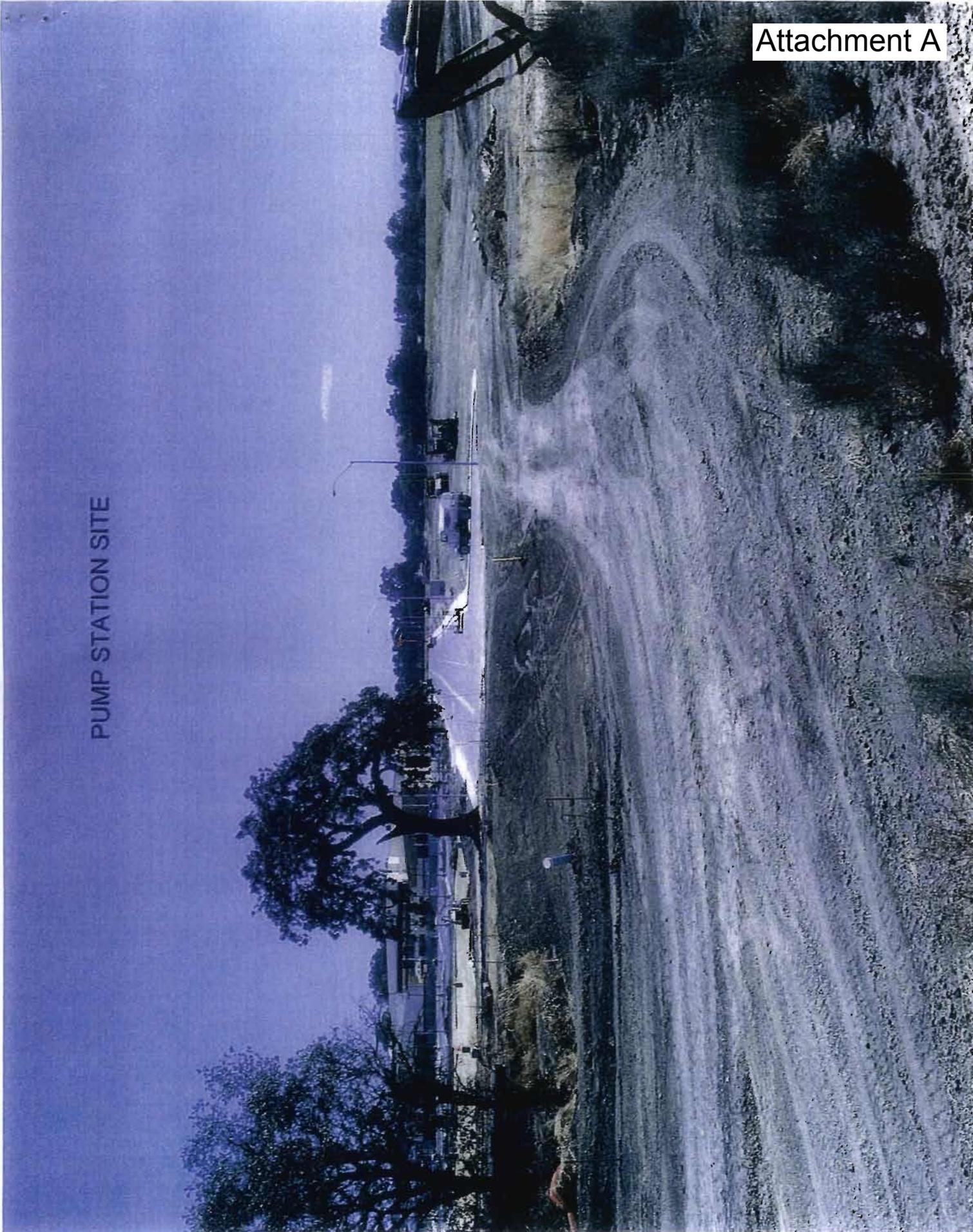
TOPOI map printed on 08/24/05 from "USGS-Map.tpo"



TN 15°



PUMP STATION SITE



LANDSIDE SOUTH LEVEE @ PUMP STATION SITE LOOKING WEST

Attachment A



SOUTH TOP OF LEVEE LOOKING NORTH ACROSS BEAR CREEK @ DISCHARGE LOCATION



Attachment A

BEAR CREEK LOOKING WESTERLY FROM  
PROPOSED DISCHARGE SITE



BEAR CREEK LOW FLOW CHANNEL LOOKING WEST



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**DRAFT**

STATE OF CALIFORNIA  
THE RESOURCES AGENCY  
**THE CENTRAL VALLEY FLOOD PROTECTION BOARD**

**PERMIT NO. 18700 BD**

**This Permit is issued to:**

Lodi Unified School District  
1305 East Vine Street  
Lodi, California 95242

To construct a stormwater pump station outfall system consisting of 1) three 24-inch and one 12-inch steel discharge pipes 2) approximately .037 acres (1612 sq. ft.) of non-grouted, facing class rock slope protection; and 3) a float sensor to stop the pumps when Bear Creek exceeds its design capacity. Project is located at 9820 North Ronald McNair Way, on the left bank of Bear Creek (Section 3, T2N, R6E, MDB&M, San Joaquin County Flood Control and Water Conservation District, Bear Creek, San Joaquin County).

**NOTE:** Special Conditions have been incorporated herein which may place limitations on and/or require modification of your proposed project as described above.

**(SEAL)**

Dated: \_\_\_\_\_

\_\_\_\_\_  
Executive Officer

**GENERAL CONDITIONS:**

**ONE:** This permit is issued under the provisions of Sections 8700 – 8723 of the Water Code.

**TWO:** Only work described in the subject application is authorized hereby.

**THREE:** This permit does not grant a right to use or construct works on land owned by the Sacramento and San Joaquin Drainage District or on any other land.

**FOUR:** The approved work shall be accomplished under the direction and supervision of the State Department of Water Resources, and the permittee shall conform to all requirements of the Department and The Central Valley Flood Protection Board.

**FIVE:** Unless the work herein contemplated shall have been commenced within one year after issuance of this permit, the Board reserves the right to

change any conditions in this permit as may be consistent with current flood control standards and policies of The Central Valley Flood Protection Board.

**SIX:** This permit shall remain in effect until revoked. In the event any conditions in this permit are not complied with, it may be revoked on 15 days' notice.

**SEVEN:** It is understood and agreed to by the permittee that the start of any work under this permit shall constitute an acceptance of the conditions in this permit and an agreement to perform work in accordance therewith.

**EIGHT:** This permit does not establish any precedent with respect to any other application received by The Central Valley Flood Protection Board.

**NINE:** The permittee shall, when required by law, secure the written order or consent from all other public agencies having jurisdiction.

**TEN:** The permittee is responsible for all personal liability and property damage which may arise out of failure on the permittee's part to perform the obligations under this permit. If any claim of liability is made against the State of California, or any departments thereof, the United States of America, a local district or other maintaining agencies and the officers, agents or employees thereof, the permittee shall defend and shall hold each of them harmless from each claim.

**ELEVEN:** The permittee shall exercise reasonable care to operate and maintain any work authorized herein to preclude injury to or damage to any works necessary to any plan of flood control adopted by the Board or the Legislature, or interfere with the successful execution, functioning or operation of any plan of flood control adopted by the Board or the Legislature.

**TWELVE:** Should any of the work not conform to the conditions of this permit, the permittee, upon order of The Central Valley Flood Protection Board, shall in the manner prescribed by the Board be responsible for the cost and expense to remove, alter, relocate, or reconstruct all or any part of the work herein approved.

#### **SPECIAL CONDITIONS FOR PERMIT NO. 18700 BD**

**THIRTEEN:** All work approved by this permit shall be in accordance with the submitted drawings and specifications except as modified by special permit conditions herein. No further work, other than that approved by this permit, shall be done in the area without prior approval of the Central Valley Flood Protection Board.

**FOURTEEN:** The permittee shall maintain the permitted encroachment(s) and the project works within the utilized area in the manner required and as requested by the authorized representative of the Department of Water Resources, San Joaquin County Flood Control & Water Conservation District or any other agency responsible for maintenance.

**FIFTEEN:** Upon receipt of a signed copy of the issued (not approved only) permit the permittee shall contact the Department of Water Resources by telephone, (916) 574-0609, and submit the enclosed postcard to schedule a preconstruction conference. Failure to do so at least 10 working days prior to start of work may result in delay of the project.

**SIXTEEN:** The Central Valley Flood Protection Board, Department of Water Resources, and San Joaquin County Flood Control & Water Conservation District shall not be held liable for any damages to the permitted encroachment(s) resulting from flood fight, operation, maintenance, inspection, or emergency repair.

**SEVENTEEN:** The permittee may be required, at permittee's cost and expense, to remove, alter, relocate, or reconstruct all or any part of the permitted encroachment(s) if removal, alteration, relocation, or reconstruction is necessary as part of or in conjunction with any present or future flood control plan or project or if damaged by any cause. If the permittee does not comply, the Central Valley Flood Protection Board may remove the encroachment(s) at the permittee's expense.

EIGHTEEN: The permittee should contact the U.S. Army Corps of Engineers, Sacramento District, Regulatory Branch, 1325 J Street, Sacramento, California 95814, telephone (916) 557-5250, as compliance with Section 10 of the Rivers and Harbors Act and/or Section 404 of the Clean Water Act may be required.

NINETEEN: The permittee shall be responsible for repair of any damages to the project levee and other flood control facilities due to construction, operation, or maintenance of the proposed project.

TWENTY: The permittee is responsible for all liability associated with construction, operation, and maintenance of the permitted facilities and shall defend, indemnify, and hold the Central Valley Flood Protection Board and the State of California; including its agencies, departments, boards, commissions, and their respective officers, agents, employees, successors and assigns (collectively, the "State"), safe and harmless, of and from all claims and damages arising from the project undertaken pursuant to this permit, all to the extent allowed by law. The State expressly reserves the right to supplement or take over its defense, in its sole discretion.

TWENTY-ONE: The permittee shall defend, indemnify, and hold the Central Valley Flood Protection Board and the State of California, including its agencies, departments, boards, commissions, and their respective officers, agents, employees, successors and assigns (collectively, the "State"), safe and harmless, of and from all claims and damages related to the Central Valley Flood Protection Board's approval of this permit, including but not limited to claims filed pursuant to the California Environmental Quality Act. The State expressly reserves the right to supplement or take over its defense, in its sole discretion.

TWENTY-TWO: If the project, or any portion thereof, is to be abandoned in the future, the permittee or successor shall abandon the project under direction of the Central Valley Flood Protection Board and Department of Water Resources, at the permittee's or successor's cost and expense.

TWENTY-THREE: Upon completion of the project, the permittee shall submit as-built drawings to: Department of Water Resources, Flood Project Inspection Section, 3310 El Camino Avenue, Suite 256, Sacramento, California 95821.

TWENTY-FOUR: No construction work of any kind shall be done during the flood season from November 1 to April 15 without prior approval of the Central Valley Flood Protection Board.

TWENTY-FIVE: Cleared trees and brush shall be completely burned or removed from the floodway, and downed trees or brush shall not remain in the floodway during the flood season from November 1 to April 15.

TWENTY-SIX: A temporary bench mark, set to a known datum, shall be placed at the project site during construction.

TWENTY-SEVEN: All four discharge pipes shall be placed in an open cut with side slopes of 1 horizontal to 1 vertical or flatter and spaced as shown on the submitted plans..

TWENTY-EIGHT: Pipe installed in the levee section and within 10 feet of the levee toes shall be new steel and at least 7 gauge for the 12-inch-diameter and 10 gauge for the 24-inch-diameter. Steel pipe

shall be corrosion-proofed externally with a coating of coal-tar enamel; asphalt-saturated felt wrap; cement mortar; or PVC or polyethylene tape wrapped to a thickness of 30 mils. Steel pipe shall be corrosion-proofed internally with a continuous lining of cement mortar or asphalt.

TWENTY-NINE: The pipeline shall be tested and confirmed free of leaks by X-ray, pressure tests, or other approved methods during construction or anytime after construction upon request by the Central Valley Flood Protection Board.

THIRTY: The invert of the pipes through the levee section shall be above the design flood plane elevation of 26.8 feet, NGV Datum.

THIRTY-ONE: All pipe joints within the levee section shall be butt welded.

THIRTY-TWO: The pipes shall be installed through the levee section at a right angle to the centerline of the levee.

THIRTY-THREE: The pipes shall be buried at least 12 inches below the levee slopes and 24 inches below the levee crown.

THIRTY-FOUR: Backfill material for excavations within the levee section and within 10 feet of the levee toes shall be placed in 4- to 6-inch layers, moisture conditioned above optimum moisture content, and compacted to a minimum of 90 percent relative compaction as measured by ASTM Method D1557-91.

THIRTY-FIVE: Density tests by a certified materials laboratory will be required to verify compaction of backfill within the levee section and within 10 feet of the levee toes..

THIRTY-SIX: A positive-closure device that is readily accessible during periods of high water shall be installed on the waterward side of the levee.

THIRTY-SEVEN: A flap gate shall be installed on the waterward end of the pipes.

THIRTY-EIGHT: The levee section and floodway shall be restored to at least the condition that existed prior to commencement of work.

THIRTY-NINE: Communication lines other than fiber-optic cables installed through the levee and within 10 feet of the levee toes shall be encased in Schedule 40 PVC conduit or equivalent.

FORTY: The permittee shall replant or reseed the levee slopes to restore sod, grass, or other non-woody ground covers if damaged during project work.

FORTY-ONE: Any additional encroachment(s) on the levee section or waterward berm, require an approved permit from the Central Valley Flood Protection Board and shall be in compliance with the Central Valley Flood Protection Board's regulations (Title 23 California Code of Regulations).

FORTY-TWO: Revetment shall be uniformly placed and properly transitioned into the bank, levee slope, or adjacent revetment and in a manner which avoids segregation.

FORTY-THREE: Revetment shall be quarry stone and shall meet the following grading:

Quarry Stone

| Stone Size | Percent Passing |
|------------|-----------------|
| 15 inches; | 100             |
| 8 inches;  | 80-95           |
| 6 inches;  | 45-80           |
| 4 inches;  | 15-45           |
| 2 inches;  | 0-15            |

FORTY-FOUR: The revetment shall not contain any reinforcing steel, floatable, or objectionable material. Asphalt or other petroleum-based products may not be used as fill or erosion protection on the levee section or within the floodway.

FORTY-FIVE: The recommended minimum thickness of revetment, measured perpendicular to the bank or levee slope, is 18 inches below the usual water surface and 12 inches above the usual water surface.

FORTY-SIX: All debris generated by this project shall be disposed of outside the floodway and off the levee section.

FORTY-SEVEN: If the permitted encroachments result(s) in an adverse hydraulic impact, the permittee shall provide appropriate mitigation measures, to be approved by the Central Valley Flood Protection Board, prior to implementation of mitigation measures.

FORTY-EIGHT: The permittee shall comply with all conditions set forth in the letter from San Joaquin County Flood Control & Water Conservation District dated September 23, 2011, which is attached to this permit as Exhibit A and is incorporated by reference.

FORTY-NINE: The permittee shall comply with all conditions set forth in the letter from the Department of the Army dated March XX, 2012, which is attached to this permit as Exhibit B and is incorporated by reference.



SAN JOAQUIN COUNTY  
**FLOOD CONTROL & WATER  
 CONSERVATION DISTRICT**

P. O. BOX 1810  
 1810 EAST HAZELTON AVENUE  
 STOCKTON, CALIFORNIA 95201  
 TELEPHONE (209) 468-3000  
 FAX NO. (209) 468-2999

THOMAS M. GAU  
 DIRECTOR OF PUBLIC WORKS  
 FLOOD CONTROL ENGINEER

September 23, 2011



Central Valley Flood Protection Board  
 3310 El Camino Avenue  
 Sacramento, California 95821

Attention: Floodway Protection Section

SUBJECT: CENTRAL VALLEY FLOOD PROTECTION BOARD PERMIT APPLICATION  
 OF THE LODI UNIFIED SCHOOL DISTRICT, McNAIR HIGH SCHOOL  
 ASSESSOR'S PARCEL NO. 084-060-16, TO CONSTRUCT A STORMWATER  
 PUMP STATION INTO BEAR CREEK

Gentlemen:

Reference is made to the Central Valley Flood Protection Board Permit Application of the Lodi Unified School District to construct a stormwater pump station west of McNair High School to pump stormwater into Bear Creek.

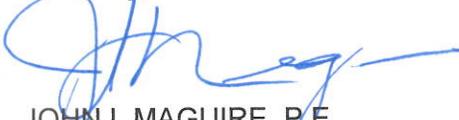
The project is located at 9820 North Ronald McNair Way, on the left bank of Bear Creek approximately 1,550 feet downstream of West Lane, in the City of Stockton, San Joaquin County, Section 3, Township 2 North, Range 6 East, Mount Diablo Base and Meridian. The San Joaquin County Flood Control and Water Conservation District (District) has reviewed the Permit Application of the Lodi Unified School District and endorses the project subject to the following conditions:

1. The District shall not be responsible for the maintenance of the facilities specified in this Permit.
2. The District shall not be held liable for damage(s) to the permitted encroachment(s) due to the District's operation, maintenance, flood fight, inspection, or emergency repairs.
3. The Facility owner, the Permittee, or the successors-in-interest shall be responsible for the modification or possible removal of the facilities, as requested by the District, if required for any future flood control plans, at the Facility owner, or Permittee, or the successors-in-interest sole cost and expense.
4. The Permittee shall be liable for any damage to Bear Creek that may occur as a result of this project.
5. The project shall be constructed in accordance with the plans submitted with the application dated June 8, 2010, and updated with a new sheet five on September 15, 2011. Any further revisions to the project will require the submittal of the revised plans to the District for review and approval.
6. No work shall be allowed in Bear Creek channel between November 1st and April 15<sup>th</sup> without prior approval of the Central Valley Flood Protection Board and the District.
7. The Facility owner, or Permittee, or the successors-in-interest shall keep the encroachments properly maintained in accordance with applicable current or future local, State and Federal standards.

8. Upon completion of the project, the Permittee shall submit a hard copy and an electronic copy in AutoCAD and PDF format of the as-built drawings to: San Joaquin County Flood Control and Water Conservation District, 1810 East Hazelton Avenue, Stockton, California 95205; and San Joaquin Area Flood Control Agency, 22 East Weber Avenue, Stockton, California 95202.
9. San Joaquin County Channel Maintenance approved visible markers shall be installed to identify the location of the buried pipes and must be maintained by the Facility owner, or Permittee, or the Successors-In-Interest until the pipes are properly abandoned. (See Enclosed)
10. Access roads shall be kept open for maintenance at all times.
11. Backfill material, within the levee or within 25 feet of the levee toe, shall be placed in four to six inch layers with approved material and compacted to a minimum of 90 percent relative compaction as per ASTM D-1557.
12. Bank and channel stabilization material (riprap) shall be placed in a manner such that no reduction in channel cross-section or increase in base flood elevation will result.

Should there be any questions regarding these comments, please contact me at (209) 953-7617.

Sincerely,



JOHN I. MAGUIRE, P.E.  
Engineering Services Manager

JIM:RF:mk  
FM-111025-M1

Enclosure

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## PROJECT DESCRIPTION

Construct Lodi Unified School District (LUSD), McNair High School, Stormwater Pump Station Outfall system. The pump station will discharge stormwater from the LUSD McNair High School Storm Drainage System, which includes the high school, future City of Stockton park and library, and approximately 17 acres southerly of the school site. The storm drainage system was previously approved by the City of Stockton and is currently being implemented. The peak 10-year storm discharge at the pump station is 58 cfs. Ownership, operations and maintenance will be transferred to the City of Stockton upon completion of the pump station and outfall system.

The pump station outfall system will be constructed within the right-of-way of Bear Creek, the receiving stream, and consists of the following components; 1) Three (3) 24-inch and one (1) 12-inch steel discharge pipes; 2) approximately 0.037 acres (1,612 sq. ft.) of non-grouted, facing class rock slope protection; and 3) a float sensor to stop the pumps when Bear Creek exceeds its design capacity.

Bear Creek is a perennial drainage that flows east to west and has a low flow channel, a flood terrace which is bounded by levees on either side. The central portion of Bear Creek, the vicinity of the low flow channel, is jurisdictional waters of the United States. The flood terrace, that portion of Bear Creek between the levees and low flow channel is routinely maintained by San Joaquin County Flood Control. None of the components of the outfall system will be constructed in the low flow channel (jurisdictional waters of the United States).

The pump station discharge pipes will be constructed through the existing Bear Creek levee at or above the 100-Year flood elevation and covered with two feet of compacted soil and four inches of aggregate base. Facing class, non-grouted rock slope protection (1,612 sq. ft.) will be installed from the end of the discharge pipes to the top of the low flow channel, approximately 62 feet. The rock slope protection is not intended to be placed in the jurisdictional waters of the United States. The rock slope protection will be installed with a backhoe or similar equipment from the levee side of the flood terrace. No equipment will operate in low flow channel (jurisdictional waters of the United States). The float sensor is a 24-inch diameter standpipe with a 4 foot square base (16 sq. ft.) and will be constructed in close proximity to the discharge pipes.

To minimize the potential for sediment entering Bear Creek construction of the outfall system will be scheduled during the low flow season, typically April through October. Additionally, silt fences will be installed upstream & downstream for 150 feet each direction; a floating curtain will be installed downstream to catch any debris; and stabilized construction entrances shall be provided; sediment rolls placed as needed along the approaches and other measures according to the SWPPP.

DATUM: N.G.V.D. 29 CITY OF STOCKTON ADJUSTMENT 1996

**McNAIR HIGH SCHOOL & BEAR CREEK  
STORMWATER PUMP STATION OUTFALL**

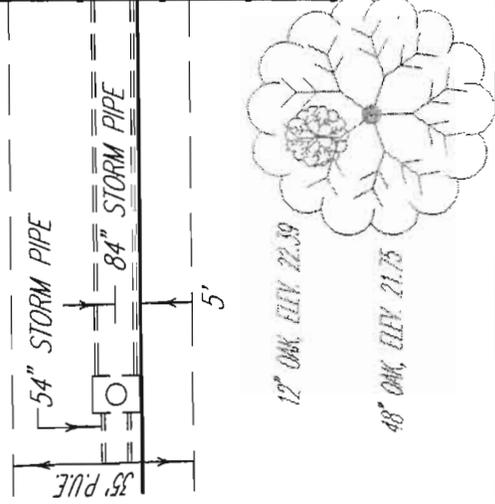
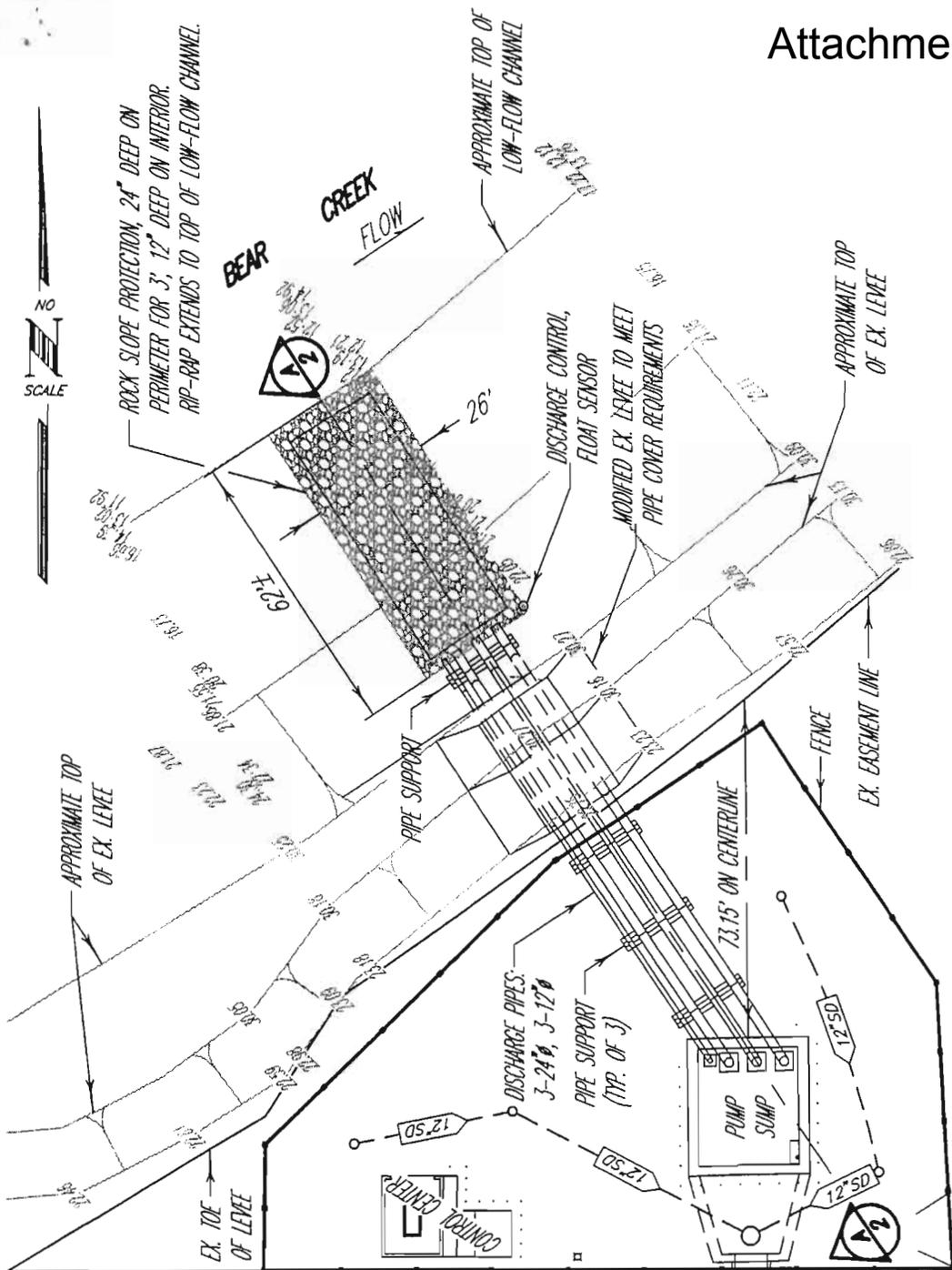
**SITE PLAN  
LUSD - McNAIR HIGH SCHOOL**

**A.R. SANGUINETTI & ASSOCIATES**  
CONSULTING CIVIL ENGINEERS

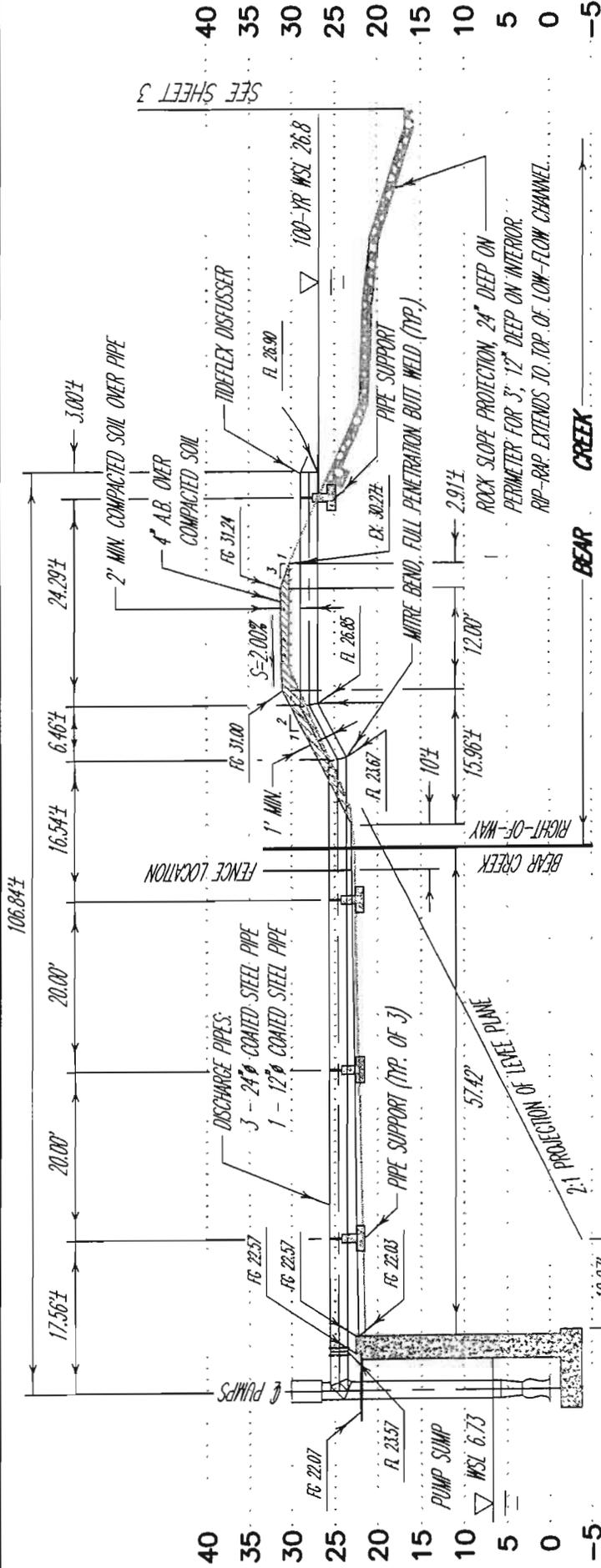
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DRAWING NO.: 1 OF 3

**LEGEND**

- EXISTING GROUND ELEVATION
- EX. EXISTING ELEVATION
- ELEV. ELEVATION



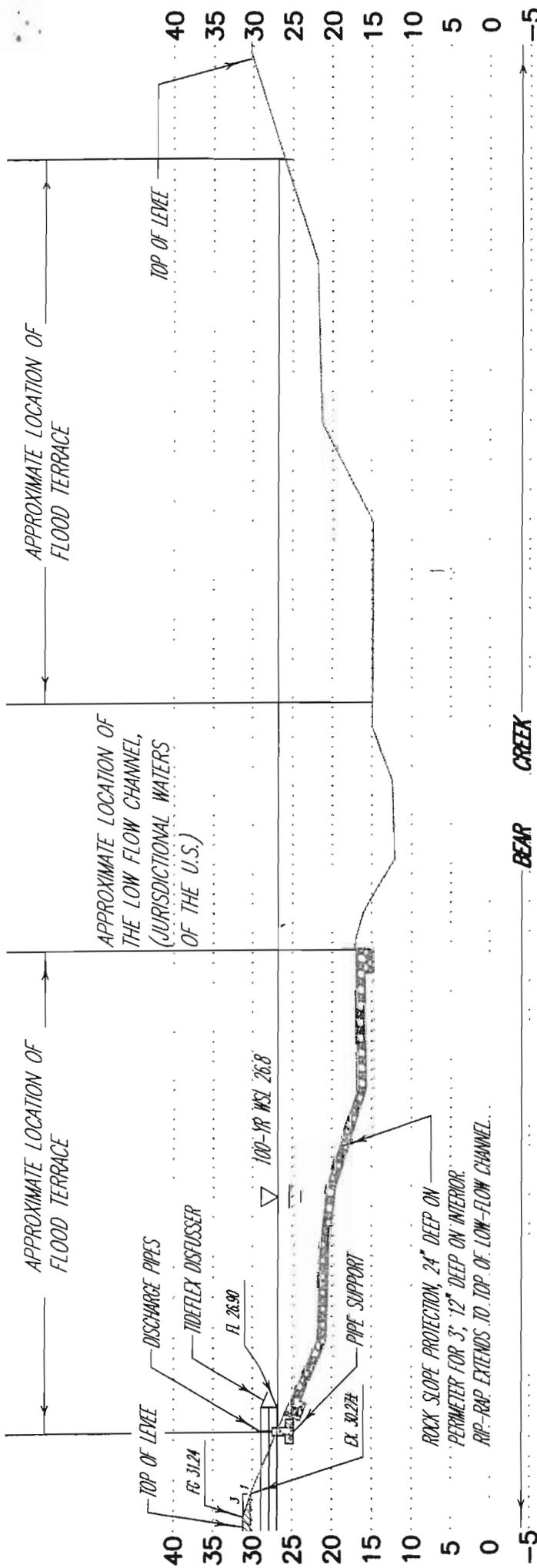
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**ROCK SLOPE PROTECTION NOTES:**

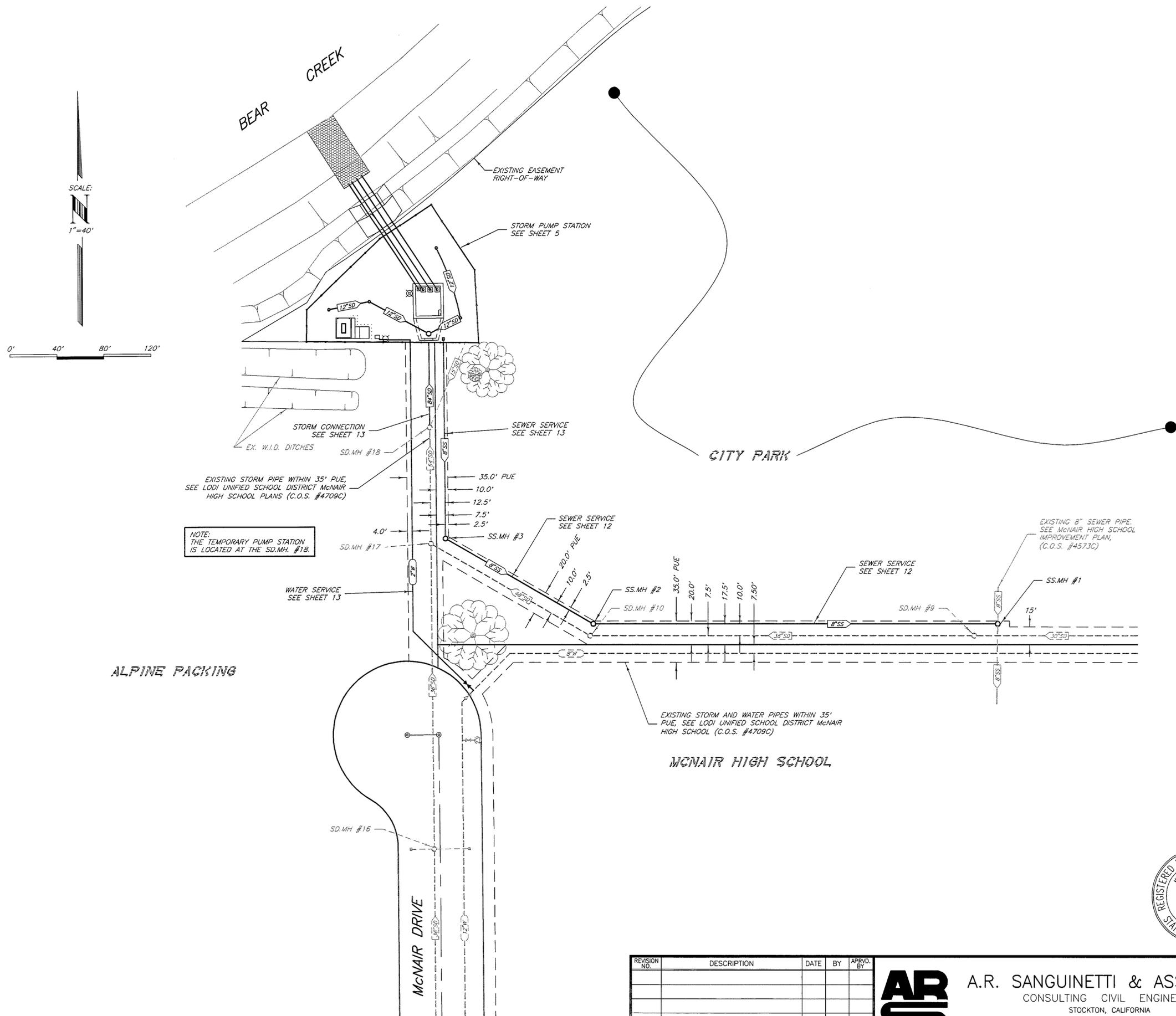
- 1) ROCK SLOPE PROTECTION (RIP-RAP SHALL BE IN ACCORDANCE WITH CALTRANS STANDARD SPECIFICATIONS, SECTION 72-2.02, FACING CLASS.
- 2) PLACEMENT SHALL BE AT THE LOCATIONS INDICATED ON THE DRAWINGS OR AS DIRECTED BY THE ENGINEER.
- 3) PRIOR TO PLACEMENT, THE SUBGRADE SHALL BE VERIFIED FOR COMPACTION AND GRADE. COMPACTION SHALL BE 85% RELATIVE COMPACTION USING THE ASTM TEST METHOD D-1557 AT A DEPTH OF 12 INCHES.
- 4) PLACEMENT SHALL BE IN ACCORDANCE WITH CALTRANS STANDARD SPECIFICATIONS, SECTION 72-2.03 "B". RIP-RAP SHALL BE UNIFORMLY PLACED AND PROPERLY TRANSITIONED INTO THE BANK & CHANNEL. SO AS NOT TO IMPEDE THE CHANNEL FLOW. NO MECHANICAL EQUIPMENT IS PERMITTED IN THE CHANNEL.

|  |           |                            |         |
|--|-----------|----------------------------|---------|
| NO.  | REV. DATE | BY                         | APPROV. |
| <p>SECTION A-A<br/>LUSD - McNAIR HIGH SCHOOL</p> |           |                            |         |
| DRAWN BY: SLM                                    |           | DATE: 4/8/05               |         |
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| SCALE: NO SCALE                                  |           | CONSULTING CIVIL ENGINEERS |         |



|                 |           |    |        |  |   |
|-----------------|-----------|----|--------|--|---|
| NO.             | REV. DATE | BY | APRVD. | <b>McNAIR HIGH SCHOOL &amp; BEAR CREEK<br/>STORMWATER PUMP STATION OUTFALL</b> | <b>BEAR CREEK CROSS SECTION<br/>LUSD - McNAIR HIGH SCHOOL</b> |
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| CHECKED BY: JMS |           |    |        | DATE   | DRAWING NO.   |
| SCALE: NO SCALE |           |    |        | 4/8/05   | 3 OF 3  |

**AR** A.R. SANGUINETTI & ASSOCIATES  
CONSULTING CIVIL ENGINEERS



NOTE:  
THE TEMPORARY PUMP STATION  
IS LOCATED AT THE SD.MH. #18.

ALPINE PACKING

McNAIR HIGH SCHOOL

McNAIR DRIVE



| REVISION NO. | DESCRIPTION | DATE | BY | APPROV. BY |
|--------------|-------------|------|----|------------|
|              |             |      |    |            |
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|              |             |      |    |            |



**A.R. SANGUINETTI & ASSOCIATES**  
CONSULTING CIVIL ENGINEERS  
STOCKTON, CALIFORNIA  
MARK A. SANGUINETTI R.C.E. 64,907 DATE \_\_\_\_\_

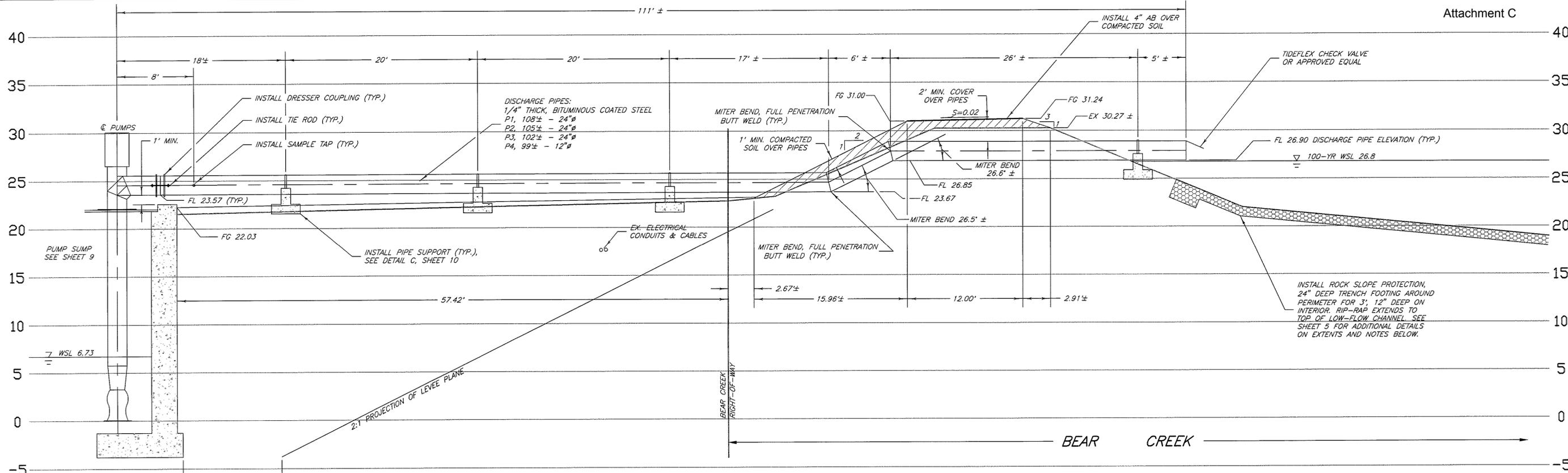
**LUSD - McNAIR HIGH SCHOOL  
STORMWATER PUMP STATION**

**MASTER SITE PLAN**

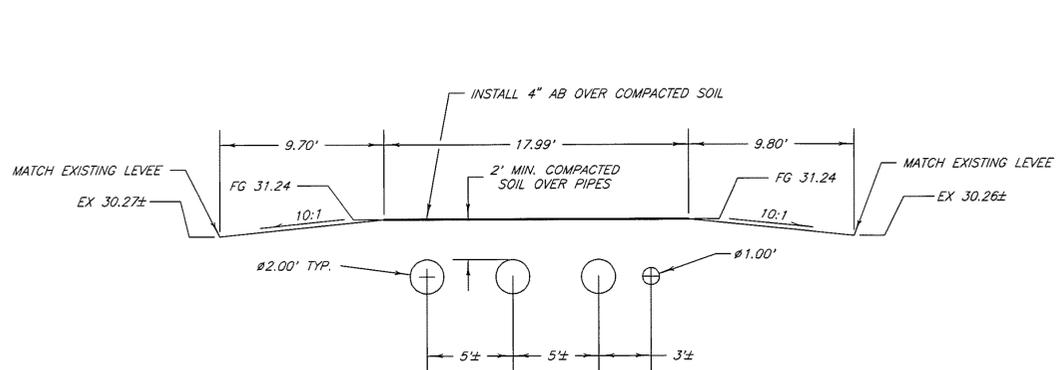
MUNICIPAL UTILITIES DEPARTMENT  
CITY OF STOCKTON, CALIFORNIA

|                    |  |              |
|--------------------|--|--------------|
| SCALE: AS SHOWN    | APPROVED BY: _____ DATE: _____                 | SHEET NO. 4  |
| DESIGNED BY: MS    | ASSISTANT DIRECTOR MUD<br>STOCKTON, CALIFORNIA | OF 26 SHEETS |
| DRAWN BY: MS       |  | PROJECT NO.  |
| CHECKED BY: MS/JMS |  |              |
| RECORD DWG:        |  |              |

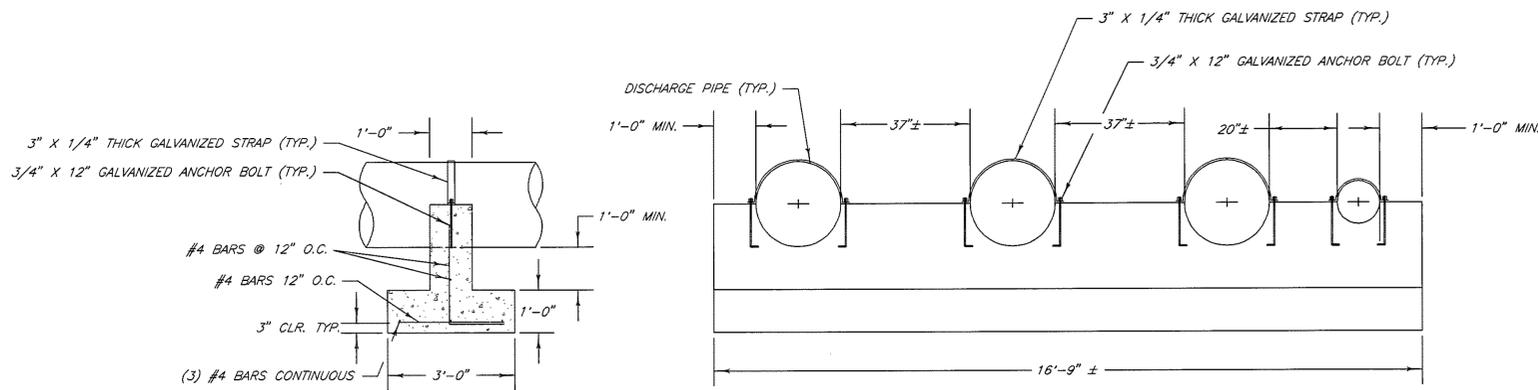




**A**  
**10** PUMP STATION DISCHARGE SECTION  
SCALE: 1"=5'



**B**  
**10** PIPE CROSSING  
AT WATER SIDE OF LEVEE



**C**  
**10** PIPE SUPPORT  
NOT TO SCALE

**ROCK SLOPE PROTECTION NOTES:**

- ROCK SLOPE PROTECTION (RIP-RAP SHALL BE IN ACCORDANCE WITH CALTRANS STANDARD SPECIFICATIONS, SECTION 72-2.02, FACING CLASS.
- PLACEMENT SHALL BE AT THE LOCATIONS INDICATED ON THE DRAWINGS OR AS DIRECTED BY THE ENGINEER.
- PRIOR TO PLACEMENT, THE SUBGRADE SHALL BE VERIFIED FOR COMPACTION AND GRADE. COMPACTION SHALL BE 85% RELATIVE COMPACTION USING THE ASTM TEST METHOD D-1557 AT A DEPTH OF 12 INCHES.
- PLACEMENT SHALL BE IN ACCORDANCE WITH CALTRANS STANDARD SPECIFICATIONS, SECTION 72-2.03 "B". RIP-RAP SHALL BE UNIFORMLY PLACED AND PROPERLY TRANSITIONED INTO THE BANK & CHANNEL, SO AS NOT TO IMPEDE THE CHANNEL FLOW. NO MECHANICAL EQUIPMENT IS PERMITTED IN THE CHANNEL.

**LEVEE RESTORATION NOTES:**

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| REVISION NO. | DESCRIPTION | DATE | BY | APPROV. BY |
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**A.R. SANGUINETTI & ASSOCIATES**  
CONSULTING CIVIL ENGINEERS  
STOCKTON, CALIFORNIA  
MARK A. SANGUINETTI R.C.E. 64,907 DATE

|  |  |             |                     |
|--|--|-------------|---------------------|
| <b>LUSD - McNAIR HIGH SCHOOL STORMWATER PUMP STATION</b>       |  |             |                     |
| <b>DETAILS - DISCHARGE PIPING</b>                              |  |             |                     |
| MUNICIPAL UTILITIES DEPARTMENT<br>CITY OF STOCKTON, CALIFORNIA |  |             |                     |
| SCALE: AS SHOWN  | APPROVED BY: _____                             | DATE: _____ | SHEET NO. <b>10</b> |
| DESIGNED BY: MS  |  |             | OF 26 SHEETS        |
| DRAWN BY: MS   |  |             | PROJECT NO.         |
| CHECKED BY: MS/JMS   | ASSISTANT DIRECTOR MUD<br>STOCKTON, CALIFORNIA |             |                     |
| RECORD DWG:  |  |             |                     |