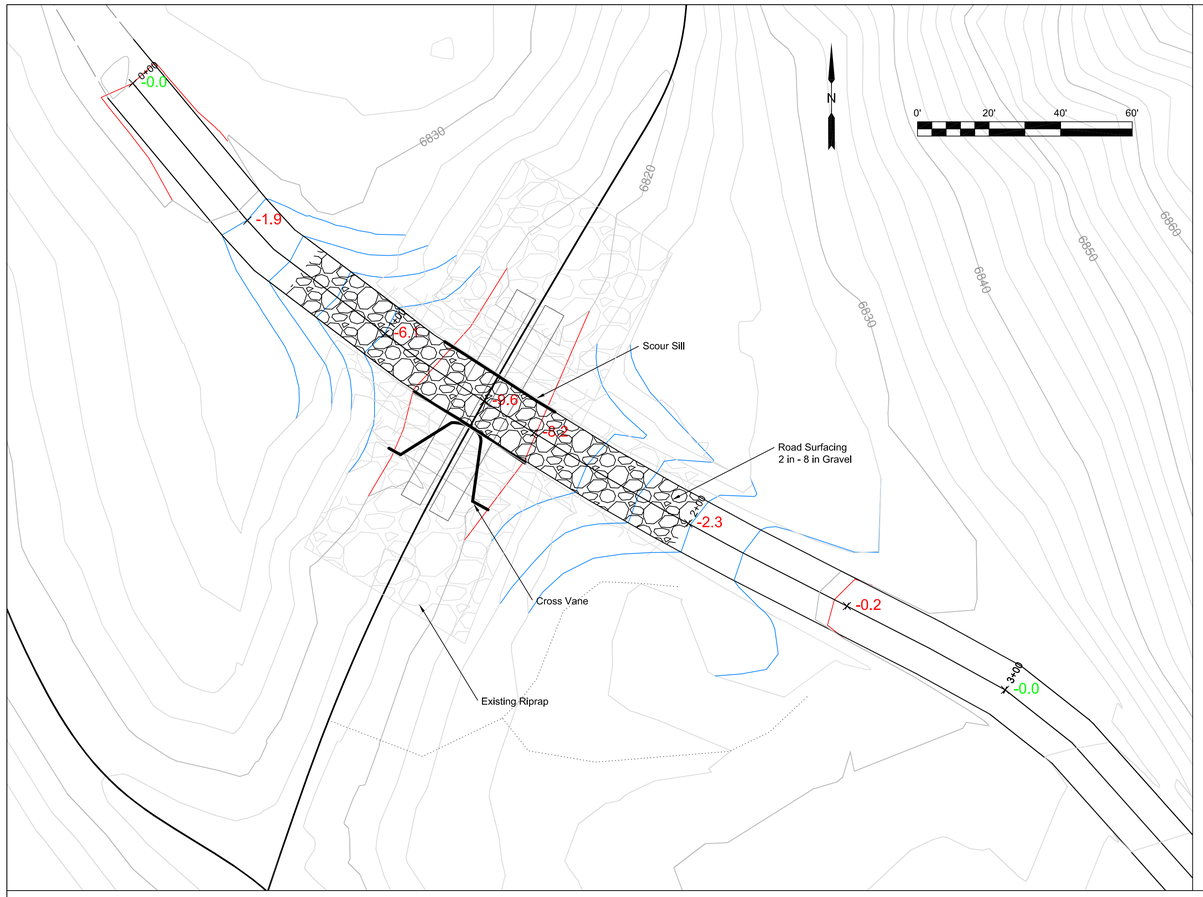
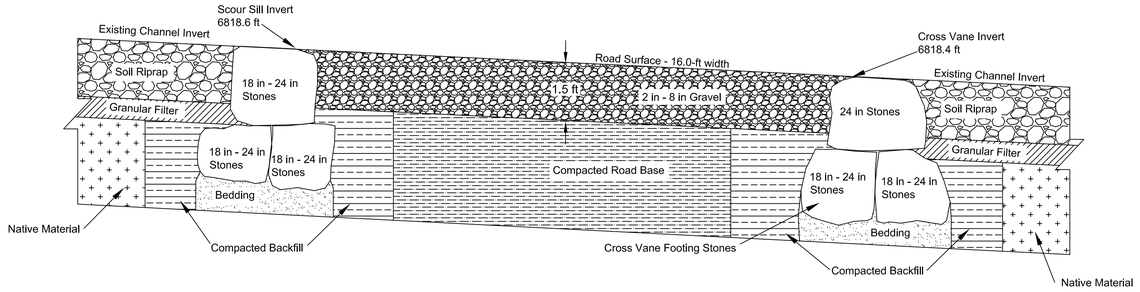
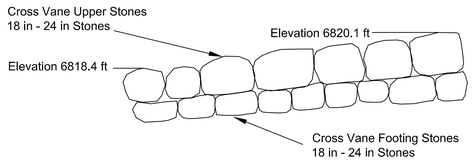


SECTION A-A'
Coal Canyon Profile with Scour Sill and Cross Vane

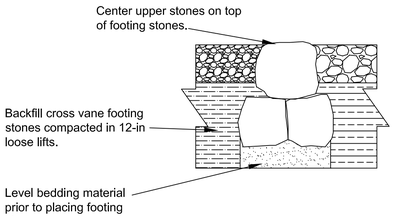


Notes:
1. If competent bedrock is encountered while excavating for scour sill or cross vane stones, bedrock may be substituted for placed stones.
2. Top of Scour Sill and Cross Vane Upper Stones shall be at existing grade in channel.
3. Riprap shall be placed as a soil matrix consisting of approximately 35% soil and 65% riprap, by volume. The mixture shall be predominantly rock with soil filling in the voids between stones. Minimum thickness of riprap material in channel shall be 1.5 ft. The ratio of the length to thickness of angular stones shall not exceed 2.
4. Riprap and stones shall be hard, angular, and highly weather resistant. The specific gravity of the individual stones shall be at lease 2.5.
5. Sill and Cross Vane stones shall be hard, highly weather resistant with a specific gravity of at least 2.5. Dimensions of stones shall be uniform in all directions with a ratio of length to thickness of approximately 1.
6. A 6-in thick granular filter or shall be placed between the base material and the riprap. The granular filter shall be a well-graded, crushed aggregate, Dmin and smaller that is hard, angular, and highly weather resistant.
7. All backfill and road base shall be compacted in 1-ft loose lifts and compacted to 95% of a Standard Proctor (ASTM D698). Any material overexcavated during construction shall be recompacted to 95% of a Standard Proctor (ASTM D698).
8. Suitable equipment will be used to pack the riprap to achieve increased stability.
9. A 4-6 in thick bedding layer shall be placed prior to iinstalling the Cross Vane Stones. Bedding material shall consist of a sandy soil free of large stones. Cross Vane Footing Stones should be in complete contact with the bedding layer free of all voids.

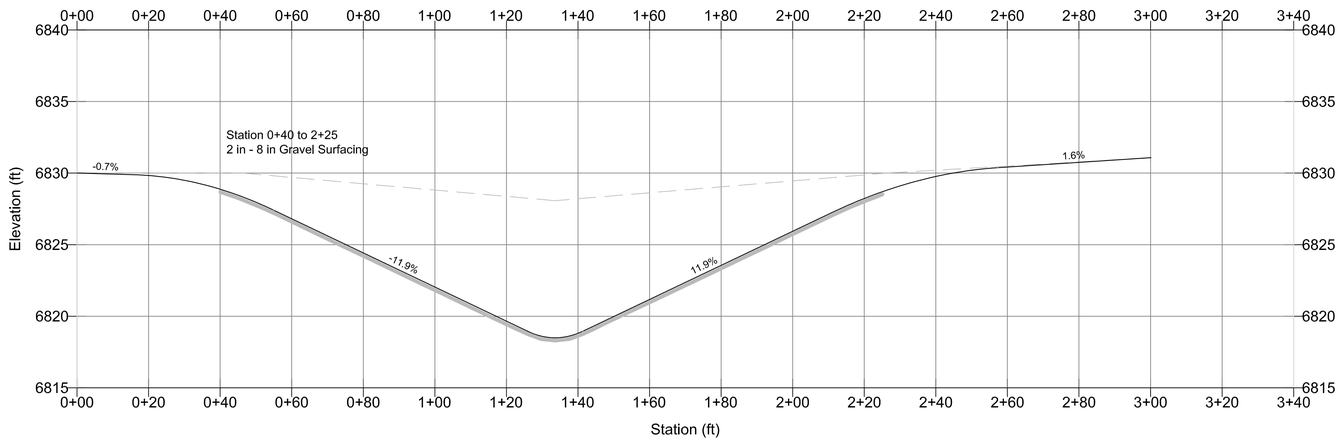
SECTION B-B'
Coal Canyon Cross Vane
Left Vane Profile (Right Vane Same as Left)

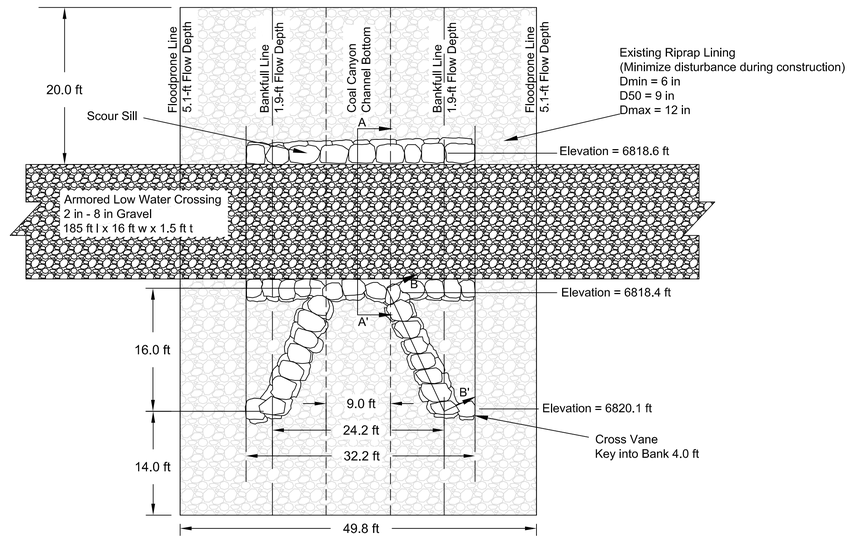


Typical Placement of Cross Vane Stones



COAL CANYON LOW WATER CROSSING PROFILE





NO.	REVISIONS	BY	DATE

DES WADE
DRN WADE
CHK SPOTTS
APPD
DATE 5-7-14

SCALE
CONTOUR INTERVAL: 2 FEET

LEGEND
- Existing Index Contour (10' Interval)
- Existing Intermediate Contour (2' Interval)
- Design Index Contour (10' Interval)
- Design Intermediate Contour (2' Interval)
- Existing Ground Profile
- Finall Ground Profile
- Cut Depth (ft)
- Constructed Channel
- Swale
- New Road
- Power Pole
- Culvert

Water & Earth TECHNOLOGIES

The horizontal coordinates are New Mexico State Plane Coordinates - East Zone, NAD 83 (HARN). The elevations are referred to sea level, NAVD 88.

PREPARED FOR
New Mexico Abandoned Mine Land Program
EMNRD - MMD

RICHARD SPOTTS
NEW MEXICO
15772
LICENSED PROFESSIONAL ENGINEER

I hereby certify that the details shown on this sheet are correct to the best of my knowledge and belief.

TASK
SWASTIKA ROAD DESIGN
COAL CANYON LOW WATER CROSSING

TITLE
COAL CANYON LOW WATER CROSSING
CROSS VANE DETAIL

SHEET
3
OF
4