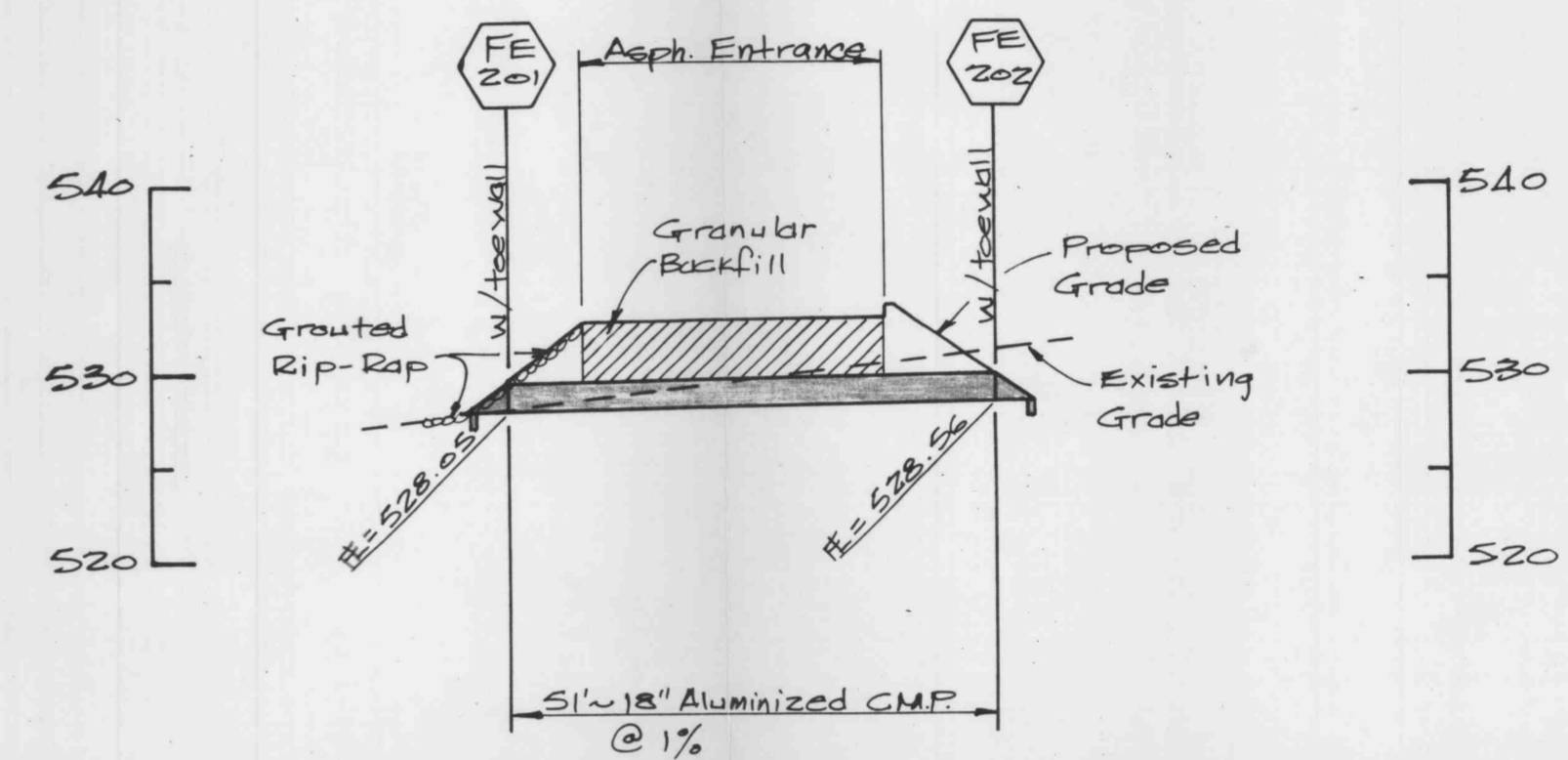
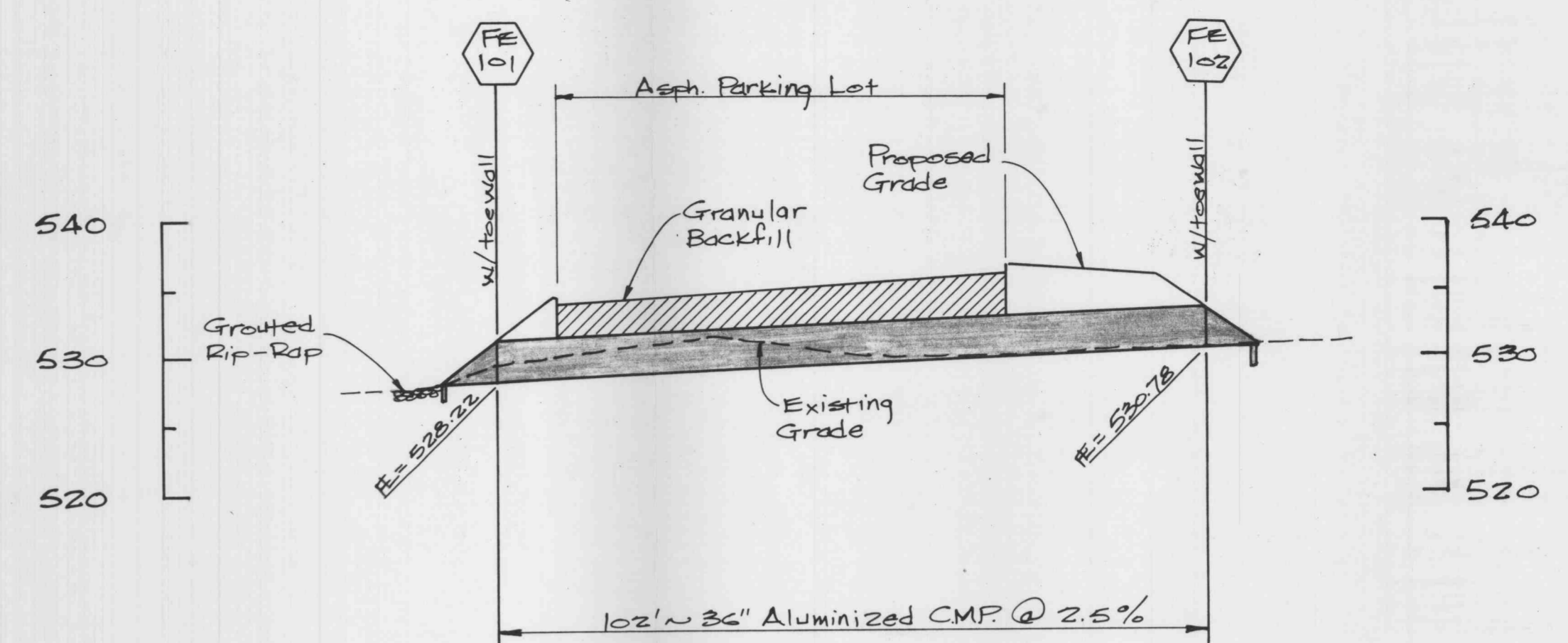


PIPE BEDDING CLASS "C"
(FOR ALL PIPE EXCEPT
REINFORCED CONCRETE PIPE)



GENERAL NOTES:

- Contractors shall coordinate all utility removal disconnections, relocations, and new service connections with the appropriate agencies/companies, and include these costs in their bid proposals.
- All construction and materials shall conform to current City of O'Fallon and O'Fallon Fire Protection District standards and specifications.
- All storm and sanitary trench backfill in paved areas shall be full-depth granular.
- All storm and sanitary trench backfill shall be water jetted.
- Corrugated metal pipe shall be helical aluminized.
- Polyvinyl Chloride (P.V.C.) sanitary sewer pipe and fittings shall be SDR-35 or equal and conform to the requirements of A.S.T.M. D-3034 standard specifications.
- The City of O'Fallon shall be notified at least 48 hours prior to construction of sanitary sewers for coordination and inspection.
- Water lines, valves, sleeves, meters and etc., shall conform to current specifications and installation requirements of the City of O'Fallon.
- All PVC water pipe shall have a minimum pressure rate of PR-200 or SDR-21.
- All filled places under buildings, proposed sanitary and storm sewer lines, and/or paved areas including trench backfills shall be compacted to 90% of maximum density as determined by the "Modified A.A.S.H.O. T-180 Compaction Test" (ASTM D-1557) unless otherwise specified by the local governing authority specifications.

PROJECT: ALAN BUTTON SITE
JOB NO.: 89-107
DATE: 1/11/90
BY: M.R.

PICKETT, RAY & SILVER
333 Mid Rivers Mall Dr.
St. Peters, Missouri 63376
(314) 441-1211

STRUCTURE INFLOW DATA: FILE NO. 89107LN1

| STRUC. NO. | DRAIN. AREA | ADJ. P.1 | ADD. CFS | TO INFL. CFS | ST. LOSS | TH. LOSS | ENT. LOSS | TOTAL Q. FLOW TO | FE |
|------------|-------------|----------|----------|--------------|----------|----------|-----------|------------------|-------|
| FE 102 | 15.66 | 3.85 | 60.29 | --- | 60.29 | --- | 0.00 | --- | 60.29 |
| FE 101 | 0.00 | 0.00 | 0.00 | --- | 0.00 | --- | 0.00 | --- | 0.00 |
| FE 202 | 1.88 | 3.85 | 7.24 | --- | 7.24 | --- | 0.00 | --- | 7.24 |
| FE 201 | 0.00 | 0.00 | 0.00 | --- | 0.00 | --- | 0.00 | --- | 0.00 |

STRUCTURE HYDRAULIC DATA: FILE NO. 89107LN1

| LINE NO. | UPPER STR. | LOWER STR. | UPPER FL LN | LOWER FL LN | UPPER ST EL. | LOWER ST EL. | PIPE SIZE | PIPE LENGTH | PIPE HD | PIPE ANGLE | REMARKS |
|----------|------------|------------|-------------|-------------|--------------|--------------|-----------|-------------|---------|------------|----------------|
| 1 | FE 102 | FE 101 | 530.78 | 531.78 | 528.22 | 531.22 | 36 | 102.00 | 0.19 | 0 | ALUMINIZED CMP |
| 1 | FE 202 | FE 201 | 528.56 | 530.04 | 528.05 | 529.55 | 18 | 51.00 | 0.13 | 0 | ALUMINIZED CMP |

STORMWATER CALCULATIONS: FILE NO. 89107LN1

| LINE NO. | UPPER STRUC. | LOWER STRUC. | UPPER PIPE SIZE | LOWER PIPE SIZE | UPPER SLOPE | LOWER SLOPE | PIPE LENGTH | PIPE VEL. | FR. HEAD | JUNC. HEAD | TURN. LOSS | DEPTH. LOSS | HYDR. LOSS | UPPER HYD EL. | LOWER HYD EL. | STR. CAP. | INLET Q. | TO PIPE Q. | PIPE CAPACITY | |
|----------|--------------|--------------|-----------------|-----------------|-------------|-------------|-------------|-----------|----------|------------|------------|-------------|------------|---------------|---------------|-----------|----------|------------|---------------|-------|
| 1 | FE 102 | FE 101 | 36 | 102.00 | 2.51 | 0.53 | 1.15 | 1.78 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 533.78 | 531.22 | 0 | 0.00 | 60.29 | 60.29 | 72.30 |
| 1 | FE 202 | FE 201 | 18 | 51.00 | 1.00 | 4.10 | 0.25 | 0.24 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 530.06 | 529.55 | 0 | 0.00 | 7.24 | 7.24 | 10.50 |

ENGINEERS AUTHENTICATION
The responsibility for professional engineering liability on this project is hereby limited to the set of plans authorized by the seal, signature and date hereunder attached. Responsibility is disclaimed for all other engineering plans involved in the project and specifically excludes revisions after this date unless reauthorized.

PICKETT, RAY & SILVER, INC.

JAMES T. SILVER
REGISTERED PROFESSIONAL ENGINEER
EX-13947

James T. Silver
Signature

1-11-90
Date

PICKETT RAY & SILVER

Civil Engineers
Planners
Land Surveyors

333 Mid Rivers Mall Dr.
St. Peters, MO 63376
441-1211 278-1211

PREPARED FOR:
MR. ALAN BUTTON
1010 BRAMBLETT ROAD
O'FALLON, MO. 63366

DRAWN: M.R. DATE: 1/11/90
CHECKED: DATE: 3
FIELD BOOK: PROJECT # 89-107
JOB ORDER # 5255 3