

RESOLUTION NO. 2006-103

RESOLUTION OF THE CITY COUNCIL OF THE CITY OF ROCKLIN
AMENDING THE CITY OF ROCKLIN CONSTRUCTION SPECIFICATIONS,
IMPROVEMENT STANDARDS AND STANDARD DRAWINGS

WHEREAS, the City of Rocklin by Resolution No. 94-98 dated April 26, 1994 adopted Construction Specifications, Improvement Standards and Standard Drawings; and amended Section 8 by Resolution 98-278 dated September 8, 1998, and amended Section 8 by Resolution 99-78 dated March 23, 1999, and amended certain sections of the Improvement Standards, Standard Drawings, and Construction Specifications by Resolution 2002-405 dated December 10, 2002, and

WHEREAS, an update to the City Construction Specifications, Improvement Standards and Standard Drawings is included as part of the Engineering Division 5-Year Work Plan, and

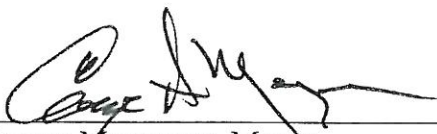
WHEREAS, a comprehensive update to the Improvement Standards and Standard Drawings, as well as a revision to Section 86 of the Construction Specifications has been accomplished,

Now, therefore be it resolved by the City Council of the City of Rocklin as follows:


Section 1. The City Council approves the amendments to the City of Rocklin Construction Specifications, Improvement Standards and Standard Drawings as set forth in that certain document dated March, 2006, and entitled City of Rocklin "Construction Specifications, Improvement Standards, Standard Drawings," on file in the office of the City Clerk of the City of Rocklin and in the office of the City Engineer.

PASSED AND ADOPTED this 28th day of March, 2006, by the following roll call vote:

AYES:	Councilmembers:	Hill, Lund, Storey, Yorde, Magnuson
NOES:	Councilmembers:	None
ABSENT:	Councilmembers:	None
ABSTAIN:	Councilmembers:	None

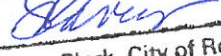

George Magnuson, Mayor

ATTEST:



City Clerk

The foregoing instrument is a
correct copy of the original document
on file in this office.

Attest: 

City Clerk, City of Rocklin

EXHIBIT A

1. Standard Drawings

- The date on all Standard Drawing has been changed to March 2006
- Drawing 1-5 Added Notes 11 & 12 – Earth work quantities and hours of construction operations respectively.
- Drawing 1-10 Record drawing signature block – Deleted the sentence “it is the responsibility of the project engineer preparing these plans to include all information that differs from the drawings originally approved by the City of Rocklin”
Added “change by the owner, developer, contractor or the City of Rocklin.”
- Drawing 2-1 Revised “V” ditch detail to add 6” berm.
- Drawing 3-1 thru 3-5 Added an *(asterisk) and Note: “*If recommended by Geotechnical Engineering Report the reinforcing fabric may be omitted as determined by the City Engineer.”
- Drawing 3-4 Deleted section for “minor arterial with median (no bike lane)”
- Drawing 3-9 Deleted sentence from Notes 1 “with 2% calcium chloride”. Added “12” minimum for concrete ring.
- Drawing 3-15 Type 5 Curb – Narrowed the batter from 4” to 2”, widened the top width from 5” to 6”.
- Drawing 3-17 Changed the “Barrier Curb” callout to “Wheel Stop”
- Drawing 3-18 Changed driveway width to 18' min. and 35' max.
- Drawing 3-20 Deleted Note #2 - “An encroachment permit for any work within the City Right-of-Way is required” as redundant of Note 1
- Drawing 3-22 Added 150’ min callout for the distance for a driveway location on the 120’ street side.
- Drawing 3-23 Revised the 10’ Rad. Min. arrow to indicate the back of walk instead of the face of curb.
- Drawing 3-28 Deleted arrow on sign.
- Drawing 3-34 Added the dimension of “4” min” to the cement grout callout.
- Drawing 4-1 Added note 5 saying “Maximum depth is 6’ or per Cal. Trans. Standards or by Special Design”.
- Drawing 4-3 The type “C” drop inlet has been eliminated
- Drawing 4-4 The type “D” drop inlet has been eliminated
- Drawing 4-5 The type “E” drop inlet has been eliminated
- Drawing 4-7(old) 4-4(new) The letter “C” has been removed from the title.
- Drawing 4-8(old) 4-5(new) The letters “D” and “E” have been removed from the title
- Drawing 4-11(old) 4-8(new) Added cross-section x-x
- Drawings 4-13 thru 4-22 Have been removed.

- Drawings 4-25(old) 4-12(new) Culvert outfall and stream bank slope protection – Added sentence “if approved by the Army Corps 404 Permit” to the 6” bed of concrete.
- Drawing 4-26(old) 4-13(new) Revised title to read “Erosion Control Pipe Discharge”.
- Drawing 4-28(old) Lined channel section was deleted
- Drawing 4-39(old) 4-25(new) Added the “Sticker” to be used for onsite commercial projects.
- Drawing 6-3 Added for Post Indicator Valve Assembly.
- Drawing 7-1(old) Removed.

2. Improvement Standards

.Section 1

- 1-2. Removed the word “humanly” – Revised “Director of Public Works” to “Engineering Services Manager”
- 1-3. DEFINITIONS - Added Construction Inspector. Revised Consulting Engineer – “Department of Public Works” to “Community Development Department Engineering Division”. Revised Director – Changed: “Director of Public Works” To: “Engineering Services Manager”
Changed: “Department of Public Works” To: “Engineering Division”
Added: MUTCD
Added: Traffic Control Device

Section 2

- 2-2 APPROVED PLANS – Revised “Department of Public Works” to “Engineering Division”
- 2-4 WORK IN RIGHTS-OF-WAY, EASEMENTS AND WATERWAYS – Added “and an Encroachment Permit obtained from the Department of Public Works”. Revised “Division 2, Chapter 5.5 of the Street and Highways Code of the State of California” To “The City of Rocklin Municipal Code Section 12.04”.
- 2-5 IMPROVEMENT PLAN SUBMITTALS - Revised “Department of Public Works” To “Engineering Division”
 - A. Revised “Four Sets” To “Five Sets”
 - C. Deleted “C”, “D” became “C” – Revised “Cost Estimate” To “Opinion of Probable Costs”. Added “including but not limited to street lights, traffic signals, and fire hydrants.”
 New “F” - Revised “Section 2-16” To “Section 2-17”
- 2-6 IMPROVEMENT PLANS RESUBMITTAL - Revised “Plans being submitted” To “Plans being resubmitted” Added “and written response to comments”
- 2-7 PLAN CHECK AND INSPECTION FEE - Revised “Department of Public Works” To “Engineering Division”

- 2-8 PLAN APPROVAL - Revised "Tracings" To "Drawings"
- 2-9 FINAL PLAN REQUIRED - Revised "Tracings" To "Drawings"
 Deleted "Copies of the Final..." Revised "A CD containing..." to read
 "All final improvement plans for residential and commercial projects shall require an electronic copy of the plans prior to City approval. This electronic copy shall be in a .pdf format on CD or DVD."
 IMPROVEMENT PLAN REVISIONS DURING CONSTRUCTION -
 A. Added "Substitution of sheets will be allowed with replacement sheets being number as: 7b, 7c, etc."
 E. Revised: "An hourly fee" To "A fee established annually by City Council"

- 2-11 Revised "AS-BUILT PLANS" To "RECORD DRAWINGS"
 Revised "The Consulting Engineer shall keep an accurate record of all approved deviations from the plans and shall provide two sets of blueines and one reproducible copy of these records to the Director upon completion of the work before final approval of the completed subdivision improvements. These are to be utilized with the Inspector's plans for preparing a complete and accurate set of "as-built" plans for the permanent records of the City.

Certification by the Consulting Engineer of the finished pad elevations of subdivision lots shall be required prior to final approval of the subdivision improvements. Certification shall be in accordance with Section 9-8." To "The Consulting Engineer shall keep accurate records of all approved deviations from the plans and shall provide two sets of plans. The Inspector will compare the submitted plans to his set and provide the Engineer a set of "redline" drawings. The Engineer shall add the Inspector's corrections or deviations to the original plans and submit three sets of prints and one set of reproducibles. The standard record drawing block will be used and the block will be signed by the consulting engineer on each sheet of the plan set at time of preparation."

ADDED: 2-12 PAD CERTIFICATION Three (3) sets of plans certified by the Consulting Engineer of the finished pad elevations of subdivision lots shall be required prior to issuance of building permit and final approval of the subdivision improvements. Certification shall be in accordance with Section 9-8. See City Standard Drawing 1-10.

- 2-20 New (2-19 old) INSPECTION REQUIREMENTS - Revised "On assessment districts" To "On publicly funded"

DELETED: 2-20(old) As Redundant

Section 3 Plan Sheet Requirements

- 3-2 Drafting Standards
 Revised "Plans approved by the City may be microfilmed. Therefore, certain drafting standards have become necessary to produce legible film and subsequent prints. All line work must be clear, sharp and heavy. Letters and numerals must be 1/8 in. minimum height, well formed and

sharp. Numerals showing profile elevations shall not be bisected by station grid lines. Dimension lines shall be terminated by sharp solid arrowheads.” To “Certain drafting standards have become necessary to produce legible film and subsequent prints. All line work must be clear, sharp and heavy. Letters and numerals must be 1/8 in. minimum height, well formed and sharp. Numerals showing profile elevations shall not be bisected by station grid lines. Dimension lines shall be terminated by sharp solid arrowheads.”

3-3 Title Sheet

Deleted E. Section Lines, Grant Lines, and Corners

Added M. Earthwork Quantities

Deleted “Improvement Plans consisting...”

3-4 Title Block

Revised “assessment district” To “public funded district”

3-6 PLAN DETAILS -

B. Topography – Revised “as built” To “Record Drawings”

C. Profiles – Added: “when appropriate”

3-7 REQUIRED NOTES – Revised “tracings” To “drawings”

Added: “ In addition to the general notes the Consulting Engineer shall be responsible for advising the Contractor to give the following notices and have in his possession the following permits and plans:

A. Contractor shall be in receipt of City approved plans prior to construction.

B. Contractor shall notify all utility companies involved in the development prior to beginning of work.

C. Contractor shall notify "Underground Service alert" (phone 800-227-2600) 48 hours in advance before any digging.

D. Contractor shall be responsible for the protection of all existing monuments and/or other survey monuments and shall notify City of Rocklin Department of Public Works of any damaged or removed City, State or Bureau monuments.

E. Contractor shall notify Department of Public Works upon application for permit and payment of required fees.

F. The Contractor shall verify all street names and their correct spelling with the Fire Department and Building Division before ordering street signs.

G. Contractor shall be responsible for conducting his operation entirely outside of any floodplain boundaries. Floodplain boundaries shall be clearly delineated in the field prior to construction.

H. Contractor shall be responsible for conducting his operation entirely outside of any no grading area. These areas shall be clearly delineated in the field prior to construction.

I. Where work is being done in an offsite easement the Contractor shall notify the property owner 48 hours prior to commencing work.”

Section 4 Streets

4-1 STREET TYPES

A. Alley – Added: “on 4 in. AB over 3 in. AC”
Added: “or per an approved R value”

4-3 STRUCTURAL SECTIONS

Switched Subsection: “A” whole subsection with “B” and Revised: “It will be required that the pavement be designed on the basis of the resistance R-value as determined in accordance with the State of California, Department of Transportation, California Bearing Ratio, or other approved method.

The thickness of the various structural components will be determined by the tables, charts, formulas and procedures contained in the State Design Manual, or as directed by the Director. Under no circumstances shall the Director approve a structural section design that is less than those specified in this section.”

Traffic index shall be determined by the Developer's Engineer for each project, and approved by the Director.

Revised old “A” to “B”

Revised 1. “2 in.” To 1. “3 in.”

4-4 PROFILE STANDARDS

Revised “B” Standard cross slope” to “The maximum grade”

Revised old “B” to “C”

Added: “Except where superelevation of a curve is required, then Caltrans Manual will be followed.”

Revised old “C” to “D”; old “D” to “E”; old “E” to “F”

4-5 PARTIAL STREETS

A. Added: “past centerline as required”

4-7 CUL-DE-SAC

Added: “unless an emergency vehicle access is provided to the satisfaction of the Fire Chief.”

4-10 SIGHT DISTANCE AT INTERSECTIONS

Revised Recommended Design Speed

From:	To:
25	30
25	30
30	35

- | | | |
|--|----|----|
| | 35 | 40 |
| | 35 | 40 |
| | 35 | 40 |
| | 40 | 50 |
| | 45 | 55 |
| | 50 | 60 |
- 4-11 RIGHT OF WAY RADII
Added: Right-of-Way Radius “Minimum”
- 4-13 BUS TURNOUTS
Revised “Bus Stop Turnouts may also be...” To “Bus Stop Turnouts may be required”
- 4-14 INTERSECTION WIDENING
Revised: “the following” to “Standard Drawing 3-11 and as determined by the Director”
Deleted Subsections A-D
- 4-16 PAVEMENT CORNER RADII
Deleted: “All others” Deleted: “*Intersects with a wider street”
- 4-17 DEVELOPER’S PAVEMENT, SIGNAL AND STREET LIGHT RESPONSIBILITY
A. 2nd Paragraph Added: “Grind and...”
- 4-18 CITY COST PARTICIPATION
Revised “Include an application” to “Include a letter request”
Deleted: 4-24 TRAFFIC SIGNS – Redundant Information.
Revised: 4-26 New (4.27 Old) “DRIVEWAYS”
To: COMMERCIAL, INDUSTRIAL, AND MULTI FAMILY DRIVEWAYS
Deleted Subsections “A” and “C”
Added to new Subsection “B”: “or 3-19 as determined by the Director.”
Added to new Subsection “C” “or 3-23 as determined by the Director.”
Added to new Subsection “D” Replaced with “matching”
Deleted Subsection “K”
- 4-28 HANDICAP RAMPS
Revised “the Standard Drawing 3-16” to “the most current State ADA Standards.”
- 4-29 CURB AND GUTTER
Deleted Subsection “A”
Revised: “B” to be “A” and rewrote as “Type 1A curb and gutter: 42, 46 and 50 ft streets in residential developments and all developments not included in B or C, or as required by the Director.”
- 4-30 BARRIER CURB
Revised “Barrier curbs shall be required at all locations...”
to “See Standard Drawing 3-17 for planter and barrier curb details.”
- 4-31 SIDEWALKS
Added “New development shall be responsible to repair existing damaged sidewalk”
- 4-32 FENCES

Revised "fences or walls shall be placed at the back of sidewalk"
to "fences or walls shall be placed at the property line"

4-36 "NOT A THROUGH STREET" SIGN

Added: All cul-de-sac and dead-end (stub) streets serving more than twelve residences shall be posted with a standard code W53 (Not A Through Street) sign. The sign post shall be 4 in. x 4 in. S4S treated douglas fir (State of California, Spec. No. 56-2.02B). The bottom of the sign shall be a minimum of 7 ft above the sidewalk and located as follows:

A. Cul-de-sac:

1. Install at the entrance of a cul-de-sac when the cul-de-sac is at the prolongation of either street, drive, or way, at the C.R. or closest property line.
2. Install at the entrance of a cul-de-sac when the cul-de-sac has a curvilinear alignment and obstructed terminus, regardless of length.
3. Install at the entrance of cul-de-sac when the length of the cul-de-sac exceeds 600 ft.

B. Non Cul-de-sac

1. Install at the C.R. or closest property line at the beginning of all of the streets, drives, ways, and arterials that have dead ends where the vehicular crossing is restricted by a physical barrier either permanent or temporary.

Deleted: "C" Responsibility

Section 5 DRAINAGE

5-6 PIPELINE ALIGNMENT REQUIREMENTS

Revised 6 ft. to 6 feet

Added 5-7 PIPELINE ACCEPTANCE CRITERIA - A mandrel test shall be conducted on all non-rigid storm drain pipes less than 24 inches in diameter, following completion of subgrade processing and compaction for curb, gutter and sidewalk and prior to placement of asphalt concrete pavement. Placement of curb, gutter and sidewalk and asphalt concrete pavement (and related aggregate base) shall not occur until the Construction Inspector has approved the mandrel test, who shall be present through the duration of the mandrel testing.

The allowable deflection for all non-rigid pipes shall be 7.5% maximum. The deflection shall be tested by pulling a mandrel which is 92.5% of the inside pipe diameter through all installed pipe. The mandrel shall be the "go/no-go" type and shall be pulled without mechanical assistance. Prior

to the mandrel test, the pipe shall be thoroughly flushed and cleaned. At each location in which the mandrel cannot pass, the cause shall be ascertained. If it is determined that the deflection exceeds 7.5%, that a gasket has been mis-installed or that the pipe has been damaged due to trenching for another utility, the respective section of pipe shall be excavated, replaced using water tight repair couplings, rebbed and backfilled. A passing mandrel retest is required after backfill and subgrade compaction, line and grade have been reestablished. Any sections of non-rigid pipe not passing the mandrel test shall be televised to ascertain the problem.

Additionally, all diameters of non-rigid storm drain pipe shall be televised to ascertain the integrity of the installed pipe. Any deficiencies noted during the televised inspection shall be reviewed and repaired, as specified for mandrel-tested pipe. A passing televised retest is required after backfill, compaction, and subgrade line and grade have been reestablished.

(NOTE: Subsections did not have 5-7 before therefore the number sequence 5-8, 5-9 etc. is the same)

5-9 HYDRAULIC DESIGN CRITERIA

- A. 3. Revised 2 ½ fps to 2.0 fps
- B. 2. Added “or until an average profile is established”
- D. 3. Revised “C.F.S. in each pipe or channel reach” to “The flow rate cubic feet per second (cfs) in each pipe or channel reach”

Added D. 10. “Show all proposed 100 yr overland release points”

5-10 DRAINAGE STRUCTURES

- B. 1. Revised “saddle type manholes shall be used where required” to “saddle type manholes shall be located at junction points, angle points greater than 15°, changes in gradient and changes in conduit size”

Deleted “In no case will junction boxes or manholes be allowed which are smaller than 24 in. inside dimensions.”

Deleted B. 2.

- B. 4. (new) 5 (old)

Revised “required when any pipe would enter the manhole above the ease of a manhole cone” to “Required when the depth does not permit use of a taper unit”

- B. 6 (new) 7 (old)

Deleted: a. Stormceptor Installation
b. Vortechincs Stormwater Products Installations

Revised C. Inlets – requirement for inlets are as follows

To C. Drop Inlets – requirements for drop inlets are as follows.

- C. 3. Deleted: “A” and “C”

- C. 4. Deleted

- C. 6. (new) 7 (old)

Deleted: Non standard...contributing watershed

Added: Shall be 2 acres “for onsite system.”

Added G. Water quality elements per NPDES requirements.

5-11 TEMPORARY DRAINAGE DIVERSIONS

B. Revised “shall be approved by the Director” to “shall be approved by Public Works”

5-12 CHANNELS AND OUTFALL DESIGN

Added A.4. All open channels to be maintained by the City shall require the recordation of a drainage easement.

Section 8. STREET LIGHTS

8-5 Revised Standard Drawing 7-5 to Standard Drawing 7-4

8-6 A. Revised Standard Drawing 7-4 to Standard Drawing 7-3

B. Revised Standard Drawing 7-6 to Standard Drawing 7-5

D. Revised Standard Drawing 7-5 to Standard Drawing 7-4

E. 4.. Revised Standard Drawing fm. 7-19 to 7-21 to Standard Drawing fm. 7-18 to 7-20

E. 5.. Revised Standard Drawing 7-3 to Standard Drawing 7-2

E. 6. Revised Standard Drawing 7-14 to Standard Drawing 7-13

E. 7. Revised Standard Drawing 7-16 to Standard Drawing 7-15

E. 8. Revised Standard Drawing 7-17 to Standard Drawing 7-16

F. 2. Revised Standard Drawing 7-5 and 7-13 to Standard Drawing 7-4 and 7-12

F. 6. Revised “Standard Plan 7-7 or 7-8” to “Standard Drawings 7-6, 7-7

G. Service

Revised Standard “Plans 7-11 and 7-12” to Standard “Drawings 7-10 and 7-11”

H. Pull boxes

2. Revised Standard “Plan 7-9” to Standard “Drawing 7-8”

I. Wiring

1. Revised Standard “Plan 7-10” to Standard “Drawing 7-9”

K. Conduit

Added 7. All interconnect conduits shall have a continuous #10 THW solid conductor, either green or purple in color installed, whether empty for future use, or with a cable installed. All conduits in all pull boxes, services, and controllers, shall be sealed with an approved sealant. All loop detector installations shall be sealed hot melt sealant. Asphaltic emulsion sealant will not be allowed.

Added 8. All service pedestals shall be installed at the back of the sidewalk.

M. Telecommunication

2. Revised “Except as Noted...”

To “A #6 telecommunication pull box will be supplied and installed for each and every lot and shall conform to the requirements of the most recent edition of the California Standard.

One pull box may be installed at a property line to service 2 lots. In the event of a long run, the maximum distance between pull boxes shall not exceed 250 feet, and be installed at a property line, or end of radius. All pull boxes to be installed within 12 inches of the back of curb, or sidewalk.”

3. Delete
- N. Added - Sidewalk Replacement - Concrete sidewalk to be installed, or replaced, adjacent to existing curb or sidewalk, shall be performed in the following manner:
 1. ¾ inch holes will be drilled in the adjacent curb and/or sidewalk at approximately a 5 degree down angle with a minimum of two holes for each curb or sidewalk surface.
 2. Spacing shall be a maximum of 6 inches from the existing concrete surface, and a maximum spacing of 2 feet.
 3. A #4 rebar, 16 inches long, will be installed in the hole.
 4. An approved two part epoxy will be provided to secure the rebar into the existing concrete.

Section 9 GRADING

9-2 PLAN SHEET DETAILS

9-2.N Added: “Standard Drawing 1-11”

9-2.O Added: “If export is offsite within Rocklin a separate grading plan showing area and route shall be approved by the Director.”
Added: “on or offsite within the City of Rocklin shall be”

9-2.P. Added to read “Excavation and Embankment earthwork quantities shall be shown on the plans”

Delete 9-3 ROLLING TERRAIN GRADING

9-6(old 9-7) GRADING AT TREES

Revised to: Grading at trees shall be done per the City of Rocklin most current tree preservation ordinance.

9-8 CERTIFYING PAD ELEVATIONS

Revised “Tracings” to “Drawings”

Revised “As Builts” to “Record Drawings”

Section 10 SOUND BARRIER DESIGN

10-1 LOCATION REQUIREMENTS

Added: “when project is conditioned”

Section 12 LANDSCAPING

12-7.M SPRINKLER HEADS

3. Added “No overhead spray unless approved in medians and parkways. Medians and parkways shall be drip irrigation for shrubs and groundcover, trees shall have bubbler heads.”

Added 5. Use of sprinkler heads with a built in check valve to reduce sprinkler head drainage

12-7.R Remote Control Valves

2. Added: Boxes shall be branded with the designated controller letter (if applicable) and valve number.

Changed 12-7 LIGHTING to 12-9 LIGHTING

Changed 12-8 TRAFFIC EQUIPMENT AND INSTALLATION to 12-10 TRAFFIC EQUIPMENT AND INSTALLATION

3. Construction Specifications

Section SS62-05 INTERNAL INSPECTION.

Replace second paragraph beginning with "As soon as possible..." with following new language:

A mandrel test shall be conducted on all non-rigid storm drain pipe less than 24 inches in diameter, following completion of subgrade processing and compaction for curb, gutter and sidewalk and prior to placement of asphalt concrete pavement. Placement of curb, gutter and sidewalk and asphalt concrete pavement (and related aggregate base) shall not occur until the Construction Inspector has approved the mandrel test, who shall be present through the duration of the mandrel testing.

The allowable deflection for all non-rigid pipes shall be 7.5% maximum. The deflection shall be tested by pulling a mandrel which is 92.5% of the inside pipe diameter through all installed pipe. The mandrel shall be the "go/no-go" type and shall be pulled without mechanical assistance. Prior to the mandrel test, the pipe shall be thoroughly flushed and cleaned. At each location in which the mandrel cannot pass, the cause shall be ascertained. Obstacles in the pipe shall be removed. If it is determined that the deflection exceeds 7.5%, that a gasket has been mis-installed or that the pipe has been damaged due to trenching for another utility, the respective section of pipe shall be excavated, replaced using water tight repair couplings, rebedded and backfilled. A passing mandrel retest and an additional TV inspection are required.

All diameters of storm drain mains and laterals, regardless of pipe material, shall be televised to ascertain the integrity of the installed pipe. This requirement is for both public and private projects. The television inspection (TVI) shall occur with a City Construction Inspector present, and shall occur after installation of the joint trench utility crossings and placement of trench backfill material to the finished subgrade elevations have been completed.

TVI shall be required and performed prior to placing asphalt concrete pavement, AND prior to the Notice of Completion for public and private subdivision projects. For commercial projects, which are not part of a subdivision, the TVI is only required prior to placement of asphalt concrete. TVI shall be performed by the Contractor. Costs for said inspection shall be borne by the Contractor. The Construction Inspector shall be notified 48 hours in advance of testing, without exception, and shall be present during the television inspection. TVI equipment shall include video cameras, a color monitor, digital recording equipment, sound and voice recording capabilities, gauging tool, cables, power sources, and all equipment necessary to perform a TVI.

The camera shall be a pan and tilt camera with pipe grade verification system (inclinometer), and shall be specifically designed and constructed for storm drain environment. The camera shall include: a solid state color TV camera with a panning and rotational camera head; remote adjustable optical focus and automatic light compensation iris with remote override; camera controller with remote focus, iris and auto centering control; and camera lighting system.

The storm drain system shall be completely cleaned by an approved method prior to TVI. The storm drain system will be rejected if any of the following conditions exist:

- a. Sags greater than 1/2-inch in depth
- b. Standing water
- c. Offset joints
- d. Cracked pipes
- e. Infiltration
- f. Hanging gaskets

Section SS86 – PAVEMENT MARKING AND TRAFFIC STRIPE REMOVAL

Replace entire Section with new Section entitled: "TRAFFIC SIGNALS, LIGHTING, ELECTRICAL SYSTEMS, TRAFFIC MARKINGS AND SIGNAGE"

This new Section provides new specifications for traffic signals, street lighting, interconnect cable, and other electrical appurtenances which have been missing from the existing Construction Specifications.