

Turtle Cove Rigid Pavement Full Depth Repair Specification

TCHOA 1-16 – RevF – 21 Jun 2021

Change Summary

1. TCHOA changed to Owner
2. Deleted driveways
3. Subgrade excavation depth is now 16"
4. Crushed concrete may no longer substitute for aggregate.
5. Added sampling requirements

1. Purpose: This specification establishes Full Depth Repair (FDR) methods for pavement. All pavement (streets, sidewalks, and alleys) except homeowner driveways is owned by Turtle Cove HOA.
2. Definitions.
 - a. Turtle Cove Homeowners Association Agent. The management company that awards and administers contracts, hereinafter Agent.
 - b. Turtle Cove HOA, hereinafter, Owner, is a neighborhood in Rockwall, TX.
 - c. Technical Representative. A technical representative (TR) appointed by the Agent to inspect work and insure compliance with provisions of this specification. The TR does not have authority to order changes to scope of work or to authorize deviations to this specification.
3. Compliance with Code: All FDR projects shall comply with all City of Rockwall codes, standards, and ordinances. The contractor shall secure construction permits from the City of Rockwall before starting work. The contractor shall abide by direction provided by City of Rockwall inspection. Batch designs shall be approved by the City Engineer 10 days prior to concrete placement.
4. Underground Utilities: The contractor shall determine the location in the repair zone of all under ground gas, telecommunications, cable, electrical conduit, water main, sanitary sewage and storm drainage infrastructure prior to breaking pavement. If this infrastructure is damaged, the contractor shall affect repair at no additional cost to the Owner. The contractor is responsible for placing pavement to match elevation and grade of utility access boxes and or manholes.
5. Streets, Alleys and Sidewalks: Shall conform to steel reinforced concrete pavement design Table 5-1.

Table 5-1

Pavement Type	Minimum Thickness	28-Day Strength	Cement Sacks/CY	Steel Reinforcing	Steel Spacing (OCEW)**
Street	7"	3,600	6.5	#3 bar	24"
Alley*	7"—5"—7"	3,600	6.5	#3 bar	24"
Sidewalk	4"	3,000	5.5	#3 bar	16"

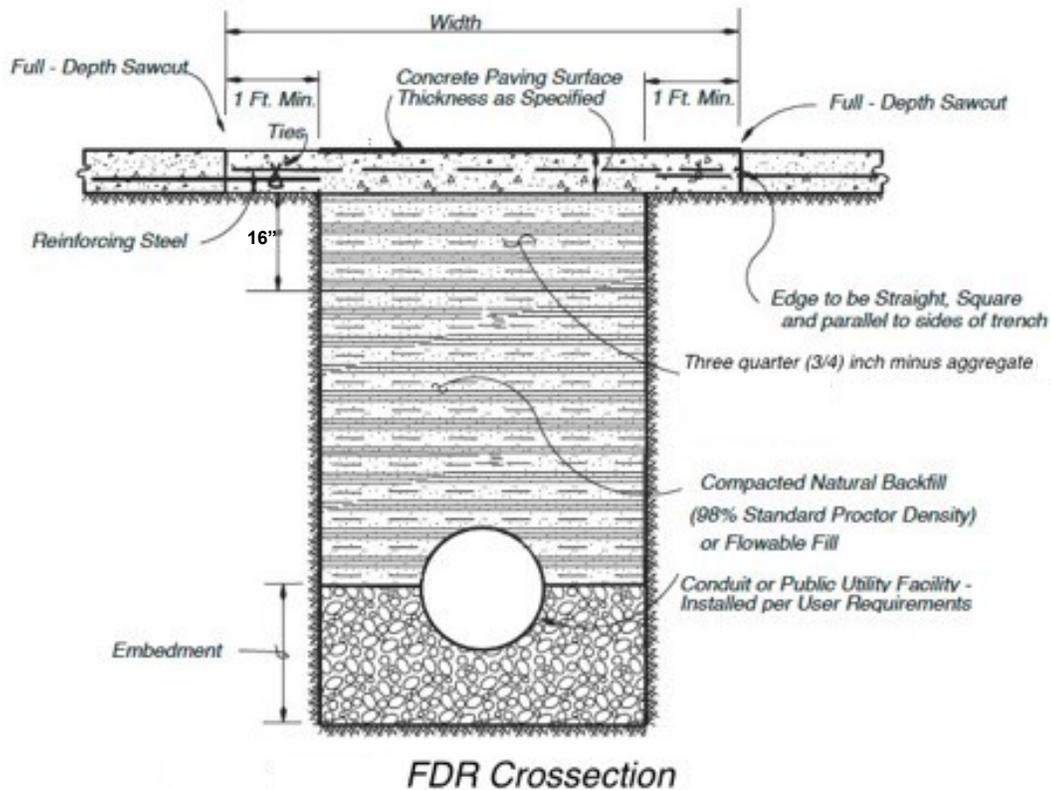
* Alleys shall be 7" at each edge tapering to 5" at center

** On center each way

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- a. Repair Limits: Repair limits are marked on the pavement with spray paint. These limits are based on visual observation and define the initial scope of work for FDR. *After pavement removal, the contractor shall notify the TR to inspect for base course voids or damage to storm drainage structure. If discovered, the TR will ask the contractor to quote additional work to extend repair.*
- b. See Figure 5-1 cross section for illustrative details.

Figure 5-1 Cross Section



- c. Saw-cut Requirements: All rigid pavement FDR shall be performed by saw-cutting using diamond-bladed saws. Carbide-tooth saws shall not be used. Cuts shall be lateral and longitudinal. No angled cuts are permitted. Replaced pavement must be installed within 7 calendar days of removal of saw-cut section.
- d. Removal of Concrete Slab: Saw-cut slab may be lifted up in sections or broken up and removed. Contractor shall be responsible for restoring subgrade condition if disturbed by slab removal. Contractor shall protect removed section to ensure exposed subbase is not supersaturated by precipitation.
- e. Repair Subgrade: Exposed subgrade shall be excavated and removed to a minimum depth of sixteen (16) inches. Removed subgrade shall be replaced with

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- c. Connections to Existing Sidewalk: All connections to existing sidewalk require a longitudinal butt joint. Dowel holes shall be drilled into existing sidewalk horizontally. Pushing dowel bars into green concrete is not permitted. Dowel bars shall be #3 reinforcing rod, 12' long, spaced at 16-inch centers, and set into existing sidewalk with epoxy. Minimum hole length is 6-inches; debris shall be removed prior to installation.
 - d. Place Concrete: Concrete shall be placed to conform to existing sidewalk grade and slope. Concrete shall be surface textured to match existing pavement. Traffic control devices shall protect concrete under cure until minimum cure is achieved.
 - e. Sidewalk ramp sections shall strictly conform to ADA and TAS approved handicapped ramp requirements. Truncated dome ramp material is preferred to textured concrete. If textured concrete is used, compliant red dye must be mixed into the concrete to ensure color permanence.
7. Inprocess Inspection: Notice is given that an inprocess inspection of repaired subgrade is required after pavement removal, after aggregate installation and compaction and prior to placement of concrete. The contractor shall request inspection by contacting the TR at the phone number and or email address in the contract. The contractor must remedy any defects in compaction noted in the inspection. A second inspection is required after defects are corrected. If the contractor fails to abide by the terms of this inprocess inspection, the contractor shall be required to remove and replace any pavement installed over uninspected portions of the work at no additional cost to the contract. Additionally, the contractor must adhere to City of Rockwall inspection process and approvals.
8. Sampling: Slump, air entrainment, and compressive strength cylinder testing shall be performed once-per-day by a qualified laboratory. Four cylinder specimens shall be taken from each daily delivery. Compressive strength testing on these cylinders shall be performed: 1 cylinder at 7-days, 1 cylinder at 14-days, and 2 cylinders at 28-days. Test results shall be disclosed to TR.
9. Compressive Strength Requirements: Twenty-eight (28) day compressive strength testing is required for all concrete used in FDR projects. If any sample fails to achieve required end strength, contractor shall remove and replace all pavement installed with the failed specimen concrete at no expense to the Owner. Contractor shall ensure laboratory reports are delivered to the TR and Agent. Each twenty-eight day compressive test shall demonstrate required end strength without averaging.
10. Job Site Restoration: The contractor shall replace grass that was removed or damaged during construction. Damaged mailbox structures shall be repaired or replaced to existing condition or better. Damaged or destroyed irrigation system components shall be repaired and restored to operating condition. Concrete splashing and cement footprints shall be removed from pavement and sidewalks adjacent to the repair location.