

Section 01555

TRAFFIC CONTROL AND REGULATION

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Requirements for signs, signals, control devices, flares, lights and traffic signals, as well as construction parking control, designated haul routes and bridging of trenches and excavations.
- B. Requirement for and qualifications of flagmen.

1.02 MEASUREMENT AND PAYMENT

- A. Traffic Control and Regulation. Measurement is on a lump sum basis for traffic control and regulation, including submittal of traffic control plan if different from plan shown on Drawings, provision of traffic control devices, and provision of equipment and personnel as necessary to protect Work and public. Amount invoiced shall be based on Schedule of Values submitted for traffic control and regulation.
- B. Payment for traffic control is on a lump sum basis and shall be authorized by City Engineer in three (3) parts. Partial payments shall be made according to following schedule:
 - 1. Payment of 25 percent traffic control amount shall be authorized when permanent control devices and necessary temporary markings, sufficiently deployed along job site as required to maintain progress of Work, are installed at job site and approved. This limiting percentage shall be prorated based upon extent of Contractors setup.
 - 2. Payment of 50 percent traffic control amount shall be authorized when pavement replacement commences. This limiting percentage shall be prorated based upon linear footage of pavement replaced, as measured along centerline axis of utility.
 - 3. Payment of 25 percent traffic control amount shall be authorized when permanent pavement markings are restored and unnecessary permanent and temporary control devices removed. This limiting percentage shall be prorated based upon extent of restoration.
 - 4. Flagmen. Measurement is on a lump sum basis for flagmen as required for Project. Amount invoiced shall be determined based on Schedule of Values submitted for flagmen.
- C. Refer to Section 01270 - Measurement and Payment for unit price procedures.

1.03 SUBMITTALS

- A. Conform to requirements of Section 01330 - Submittal Procedures.
- B. Traffic control plan responsive to Texas Manual on Uniform Traffic Control Devices (TMUTCD) sealed by Registered Professional Engineer is incorporated into Drawings. If Contractor proposes to implement traffic control without modification to plan provided, submit a letter confirming decision. If contractor proposes to implement traffic control different than plan provided, submit a traffic control plan in conformance with TMUTCD sealed by Registered Professional Engineer.
- C. Submit copies of approved lane closure permits as issued by City Traffic Management and Maintenance Branch.
- D. For both traffic control plan and flagmen use, submit Schedules of Values within 30 days following Notice to Proceed. Refer to Section 01292 - Schedule of Values.
- E. Provide information and records regarding use of qualified flagmen to verify use of Peace officers as flagmen in compliance with Contract and Texas law, including but not limited to, Article 4413 (29bb), commonly referred to as Private Investigators and Private Security Agencies Act, and Article 2.12, Texas Code of Criminal Procedure.
- F. Provide information and records regarding use of qualified flagmen to verify Contractors use of a certified flagmen as flagmen is in compliance with Contract and applicable City ordinance.

1.04 FLAGMEN

- A. Use flagmen, qualified as described under paragraph 1.04.B, Uniformed Peace Officers, and paragraph 1.04.C, Certified Flagmen, to control, regulate, and direct even flow and movement of vehicular and pedestrian traffic when construction operations encroach on public traffic lanes.
- B. Uniformed Peace Officer: Individual who has full-time employment as peace officer and receives compensation as flagman for private employment as individual employee or independent contractor. Private employment may be either employee-employer relationship or on an individual basis. Flagman may not be in employ of another peace officer and may not be a reserve peace officer.
 - 1. Peace officer is defined as:
 - a. Sheriffs and their deputies
 - b. Constables and deputy constables
 - c. Marshals or police officers of an incorporated city, town or village

- d. As otherwise provided by Article 2.12, Code of Criminal Procedure, as amended
 2. Individual who has full-time employment as a peace officer is one who is actively employed in a full-time capacity as a peace officer working, on average, a minimum of 32 paid hours per week, being paid a rate of pay not less than prevailing minimum hourly wage rate set by federal Wage and Hour Act and entitled to full benefits of participation in retirement plan, vacation, holidays, and insurance benefits. A reserve peace officer does not qualify, under this definition, as a peace officer.
- C. Certified Flagman: Individual who receives compensation as flagman and meets the following qualifications and requirements:
1. Formally trained and certified in traffic control procedures with right of approval through City.
 2. Required to wear distinctive uniform, bright-colored vest, and be equipped with appropriate flagging and communication devices.
 3. English speaking, with Spanish as advantageous, but not required, primary or secondary language.
 4. Paid as Certified Flagman, equivalent to hourly wage rate set for Rough Carpenter under Document 00812, Wage Scale for Engineering Construction.
 5. Required to carry proof of training/certification and photographic identification card issued by training institute to allow City Engineer to easily determine necessary full-time traffic control is actually provided when and where construction work encroaches upon traffic lanes.

PART 2 PRODUCTS

2.01 SIGNS, SIGNALS, AND DEVICES

1. Comply with Texas State Manual on Uniform Traffic Control Devices.
2. Traffic Cones and Drums, Flares and Lights: As approved by local jurisdictions.

PART 3 EXECUTION

3.01 PUBLIC ROADS

1. Complete lane closure request form and submit to Traffic Management and Maintenance branch 10 working days prior to blocking lanes used by vehicular traffic.

2. Secure a Lane/Sidewalk Closure Permits from City's Traffic Management and Maintenance Branch before closing lane/sidewalk. Make request at least three business days prior to date for which closure is sought. Note that working hours may be restricted or request may be denied. Call _____ for application.
3. Abide by laws and regulations of governing authorities when using public roads. If Work requires public roads be temporarily impeded or closed, obtain approvals from governing authorities and pay permits before starting any Work. Coordinate activities with City Engineer.
4. Maintain 10-foot-wide all-weather lane adjacent to Work areas for use of emergency vehicles. Keep all-weather lane free of construction equipment and debris.
5. Construction activities not to obstruct normal flow of traffic from 7:00 a.m. to 9:00 a.m. and 4:00 p.m. to 6:00 p.m. on designated major arterials or as directed by City Engineer.
6. Maintain local driveway access to residential and commercial properties adjacent to Work areas at all times. Use all-weather materials as approved by City Engineer when maintaining temporary driveway access to commercial and residential driveways.
7. Cleanliness of Surrounding Streets: Keep streets used for entering and leaving job area free of excavated material, debris, and foreign material resulting from construction operations. Comply with City of Tomball Ordinance, Construction or Demolishing Privileges.
8. Provide City Engineer one-week notice prior to implementing each approved traffic control phase. Warn businesses of impending traffic control plans.
9. Notify local schools, churches, police department, commercial businesses, and fire department in writing of construction a minimum of five (5) working days prior to beginning Work.
10. Remove existing signing and striping that are in conflict with construction activities or may cause driver confusion.
11. Provide safe access for pedestrians along major cross streets.
12. Alternate closures of cross streets so that two adjacent cross streets are not closed simultaneously.
13. Do not close more than two consecutive esplanade openings at a time without prior approval by City Engineer.

3.02 CONSTRUCTION PARKING CONTROL

1. Control vehicular parking to prevent interference with public traffic and parking, access by emergency vehicles, and City's operations.
2. Monitor parking of construction personnel's vehicles in existing facilities. Maintain vehicular access to and through parking areas.
3. Prevent parking on or adjacent to access roads or in non-designated areas.

3.03 FLARES AND LIGHTS

1. Provide flares and lights during hours of low visibility to delineate traffic lanes and to guide traffic.

3.04 HAUL ROUTES

1. Utilize haul routes designated by authorities or shown on Drawings for construction traffic.
2. Confine construction traffic to designated haul routes.
3. Provide traffic control at critical areas of haul routes to regulate traffic and minimize interference with public traffic.

3.05 TRAFFIC SIGNS AND SIGNALS

1. Construct necessary traffic control devices for temporary signals including but not limited to loop detectors, traffic signal conduits, traffic signal wiring and crosswalk signals required to complete Work. Notify, a minimum of 60 days in advance, City of Tomball Traffic Management and Maintenance Division concerning control boxes and switchgear. City of Tomball will perform service, programming or adjustments, to signal boxes and switchgear should this work be required during construction.
2. Install and operate traffic control signals to direct and maintain orderly flow of traffic in areas under Contractor's control and areas affected by Contractor's operations. Establish notices, signs and traffic controls before moving into next phase of traffic control.
3. Relocate traffic signs and signals as Work progresses to maintain effective traffic control.
4. Unless otherwise approved by City Engineer, provide driveway signs with name of business that can be accessed from particular crossover. Use two signs for each crossover.
5. Replace existing traffic control devices in project area.

6. City Engineer may direct Contractor to make minor traffic control sign adjustments to eliminate driver confusion and maintain traffic safety during construction at no additional payment.

3.06 BRIDGING TRENCHES AND EXCAVATIONS

1. Whenever necessary, bridge trenches and excavation to permit an unobstructed flow of traffic. Provide steel plates that can be laid across construction areas and major drives of commercial businesses.
2. Secure bridging against displacement by using adjustable cleats, angles, bolts or other devices whenever bridge is installed:
 1. On existing bus route
 2. When more than five percent of daily traffic is comprised of commercial or truck traffic
 3. When more than two separate plates are used for bridge
 4. When bridge is to be used for more than five consecutive days
3. Install bridging to operate with minimum noise.
4. Adequately shore trench or excavation to support bridge and traffic.
5. Extend steel plates used for bridging a minimum of one foot beyond edges of trench or excavation. Use temporary paving materials (premix) to feather edges of plates to minimize wheel impact on secured bridging.
6. Use steel plates of sufficient thickness to support H-20 loading, truck or lane, which produces maximum stress.

3.07 REMOVAL

1. Remove equipment and devices when no longer required.
2. Repair damage caused by installation.
3. Remove post settings to a depth of 2 feet.

3.08 TRAFFIC CONTROL, REGULATION AND DIRECTION

1. Use flagmen to control, regulate and direct even flow and movement of vehicular and pedestrian traffic including but not limited to the following conditions:
 1. Where multi-lane vehicular traffic must be diverted into single lane vehicular traffic
 2. Where vehicular traffic must change lanes abruptly
 3. Where construction equipment must enter or cross vehicular traffic lanes and walks
 4. Where construction equipment may intermittently encroach on vehicular traffic lanes and unprotected walks and crosswalks
 5. Where traffic regulation is needed due to rerouting of vehicular traffic around Work site
 6. Other areas of Work where construction activities might affect public safety and convenience.
2. Use and maintain flagmen at points for periods of time as may be required to provide for public safety and convenience of travel.
3. Use of flagmen is for purpose of assisting in regulation of traffic flow and movement and does not relieve Contractor of full responsibility for taking other steps and providing other flaggers or personnel, as Contractor may deem necessary to protect Work and public.

3.09 INSTALLATION STANDARDS

1. Work in other phases shall be permitted, provided 1) phases are not continuous to one work is being done in presently, 2) installation of utility occurs in only one phase. Keep work and operation in second phase to an absolute minimum. Perform work in no more than two phases at a time. Authorization to perform work in second phase shall not relieve any responsibility of completing backfilling and paving operations in accordance with Contract.
2. Place temporary pavement with a single lane closure, in accordance with TMUTCD.
3. Reinstall temporary and permanent pavement markings as directed by City Engineer. Alternative markings shall be considered when marking manufacturers weather conditions cannot be met. These alternatives are to be submitted and approved by City Engineer prior to installation. No extra payment will be made for use of alternative markings.

3.10 MAINTENANCE OF EQUIPMENT AND MATERIAL

1. Designate individual to be responsible for maintenance of traffic handling around construction area. Individual must be accessible at all times to immediately correct any deficiencies in equipment and materials used to handle traffic including missing, damaged, or obscured signs, drums, barricades, or pavement markings. Give name, address and telephone number of designated individual to City Engineer.
2. Make daily inspections of signs, barricades, drums, lamps and temporary pavement markings to verify that these are visible, in good working order, and conform to traffic handling plans and directions of City Engineer. When not in compliance, immediately bring equipment and materials into compliance by replacement, repair, cleaning, relocation, and realignment.
3. Keep equipment and materials, especially signs and pavement markings, clean and free of dust, dirt, grime, oil, mud, or debris.
4. City Engineer shall decide if damaged or vandalized signs, drums, and barricades can be reused.

END OF SECTION