Headquarters Maintenance

Overview
Maintenance Management Systems (Section 42)

Contract Maintenance

- Coordinate statewide contract maintenance
  - FY 2018 – Statewide Contract Maintenance Funding: $25M
  - Mowing/Litter, Signal Agreements, Rest Areas, Guardrail, Sweeping & Bridge Deck Drains, Pavement Markings, Loop Repair
    - $22.2M, distributed to districts based on existing contracts/renewals
    - $2.8M retained at HQ to administer attenuator and median cable barrier contract repairs

- Support districts with standardized specifications, bidding, and contract documents for maintenance contracts.

- Also provide support to other sections/districts on bidding
Statewide Crew
- Statewide crew assists the district with jobs that require larger pieces of equipment that most of the district offices don’t have.
  - 1 Foreman, 5 MEO2/Heavy
  - Activities include joint cutting, brush/tree trimming, brush removal, culvert cleaning, stump-grinding

Equipment Unit
- Equipment acquisitions for fleet of 5,500+ units of equipment statewide at an estimated replacement cost of $205M
  - $2M - $12M annual program for outright acquisitions
  - Manage $16M, annual buy-back program (~140 pieces)
  - More than 60% of equipment exceeds age replacement criteria
- Responsible for statewide property management
  - 22,000+ assets
  - Coordinate with 50 property coordinators statewide
- Coordinate the GPS Fleet Monitoring Program
- Manage requests for home storage of DOTD vehicles
Maintenance Management Systems (Section 42)

Other Functions

• Agile Assets/Plant Maintenance – provide support and training statewide
• Fueltrac – assist with support, policy, and procedures
• Central Repair Shop – repair of District 61 and Headquarters equipment
• Ferry Operations & Maintenance – operate Plaquemine/Sunshine ferry
• Damage Assessment – coordinate damage assessment process
• Coordinate State Roadeo & Innovations Showcase committees and events
Section 45

Traffic Services
Traffic Services (Section 45)

Primary Responsibilities

• Provide Contraflow support
• Responsible for maintaining Sections 736, 737, 1015 and 1020 in Louisiana Standard Specifications For Roads and Bridges and construction details.
• Responsible for establishing and maintaining Traffic Operation Approved Product List (TOAPL).
• Responsible for traffic control devices purchasing contracts.
• Develop training materials and coordinate training events for new technologies for districts.
• Provide technical assistance to Districts and other sections in design, study and construction projects.
Traffic Services (Section 45)

Traffic Signal Section

• Engineering/Operations Section
• Signal Fabrication Shop
• Statewide Field Crews
  • 6x Signal Construction and Maintenance Crews
    • Provide emergency services to repair damaged or destroyed traffic signals
    • Perform traffic signal construction and modifications
  • 1x Inductive Loop Installation Crew
  • 1x Directional Boring Crew
• Traffic Signal Construction Inspection Team
Traffic Services (Section 45)

Signs and Pavement Markings Section

• Engineering/Operations Section
• Sign Fabrication Shop
• Field Crews
  • 4x Sign Construction and Maintenance Crews
    • Provide emergency services to repair damaged or destroyed traffic Interstate signs
    • Perform traffic sign construction and modifications
• Sign & Pavement Markings Inspection
Structures and Facilities (SECTION 51)

- BRIDGE MAINTENANCE
  - BRIDGE REPLACEMENTS
  - BRIDGE REPAIRS
  - FENDER SYSTEM REPAIRS
- INSPECTION
  - BRIDGE INSPECTION
  - TUNNEL INSPECTION/
    - ANCILLARY STRUCTURE INSPECTION
- MOVABLE BRIDGE MAINTENANCE
- TRUCK PERMITS
- FACILITIES MAINTENANCE
Structures and Facilities (Section 51)

BRIDGE REPLACEMENTS
BRIDGE INSPECTION

• Louisiana has 18 of the top 20 longest bridges in the country.
• Louisiana bridges have the fourth highest amount of deck area in the country.
• Nick Fagerburg serves as the National Bridge Inspection Program Manager for the State of Louisiana.
• There are approximately 13,000 bridges (on public roads) that require an inspection every 24 months.
• Each District has a bridge inspection office that performs these inspections on state roads (on-system) and local roads (off-system).
• Section 51 performs the Quality Assurance bridge inspections to ensure that the bridge inspections are in compliance with Federal regulations (METRICS)
• Section 51 oversees the Underwater Bridge Inspections that are performed by consultants.
Nick Fagerburg serves as the National Tunnel Inspection Program Manager for the State of Louisiana.

There are 3 tunnels in Louisiana.

The Belle Chasse Tunnel opened in 1956 followed by Harvey Tunnel in 1957, and finally Houma Tunnel in 1961.

The National Tunnel Inspection Standards were implemented in August of 2015.
ANCILLARY STRUCTURE INSPECTION

• Ancillary Structure Inspection program began in 2014 starting with the inventory and inspection of overhead sign truss structures.

• Approximately 1400 structures

• Findings range from minor maintenance such as bolt tightening to taking a structure out of service.

• Section 45’s sign crew removes the signs. Kudos to Phillip Macaluso and his crew.
MOVABLE BRIDGE MAINTENANCE

- Louisiana has 146 movable bridges (the most in the country)
- Types:
  - Bascule
  - Swing Span
  - Pontoon
  - Vertical Lift
TRUCK PERMITS

• In fiscal year 2016/2017 the Truck Permits gang issued 223,321 permits at a total cost of $23,071,827

• Currently Truck Permits is implementing an automated truck permit routing software called LAGeaux. This system will pre-determine a truck route and issue the required permit.
FACILITIES AND LANDSCAPE MAINTENANCE

• Rest Area in Lincoln Parish that won the Silver Rose Award given by the American Institute of Architects Baton Rouge.
Outdoor Advertising Control

• Effective control of outdoor advertising is required by FHWA under the 1965 Highway Beautification Act.

• The OAC program in Louisiana became effective January 31, 1972 upon agreement with the U.S. Department of Transportation.

• LaDOTD is responsible for controlling the erection and maintenance of outdoor advertising signs adjacent to the National Highway System (NHS).

• Failure to comply can result in FHWA’s withholding of 10% of federal highway allocations.
Outdoor Advertising Control:

In order to provide effective control of outdoor advertising, the State must:

• Assure that signs erected comply with size, lighting, and spacing criteria.
• Remove illegal signs expeditiously.
• Maintain a current sign inventory.
• Issue Outdoor Advertising permits.
• Invoice permittees annually.
Scenic Byways

• Coordinate the production and installation of all byway signs.

• Review all Segmentation requests for Dept. of Tourism.

• Control signage/junkyards on Louisiana’s 17 scenic byways.
Junkyard Inventory & Control

LADOT is required to regulate all junkyards on controlled routes and enforce screening or removal of all non-compliant sites.
Logos & TODS Program:

LaDOTD is responsible for managing contract with Interstate Logos for all Logos and Tourist Oriented Signage.
DOTD’s MAINTENANCE MANAGEMENT SYSTEMS

• PM/SAP

• AGILE
SIMILARITIES AND DIFFERENCES...

Similarities
- Work Order Systems
- Track Cost
- Track Vehicle Usage

Differences

<table>
<thead>
<tr>
<th>PM</th>
<th>AGILE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Labor is in ISIS</td>
<td>Labor is on Work Order</td>
</tr>
<tr>
<td>No Activity Codes</td>
<td>Activity Codes</td>
</tr>
<tr>
<td>Transactions</td>
<td>Reports</td>
</tr>
<tr>
<td>Updated Live</td>
<td>Updated Nightly</td>
</tr>
</tbody>
</table>
WHAT IS PLANT MAINTENANCE...

- Maintenance Management System
  - Captures Work Orders for Fleet and Facilities
  - Tracks Moveable Property Assets
  - Module in SAP
PLANT MAINTENANCE

• In Plant Maintenance, two basic documents are used to plan, schedule, manage, execute and record work and costs associated with fleet and facilities.

  ➢ **Notifications**  {A request for maintenance and a record of the results of maintenance/technical findings. Notifications are used in the maintenance process for facilities and fleet and to manage controlled assets/movable property}

  ➢ **Work Orders**  {Work Order is used to plan and schedule labor, materials, and services. It is also the cost collector for the resources (parts, labor, equipment, etc.) used on the job}
PLANT MAINTENANCE

• **Notifications:**
  - Request the maintenance unit to perform a necessary task
  - Document work that has been performed
  - Scanned invoices or receipts
  - Collect history of a maintenance activity
  - Provide coding for work completed

• **Work Orders:**
  - Manage and track all maintenance costs
  - Record labor associated with the Work Order
  - Provide a historical record of maintenance tasks
  - Provide data for FEMA reimbursements (equipment usage and materials consumed)
PLANT MAINTENANCE

• Updates:

- Fleet Object No. is now an available field to be added in Notification (IW28/29) and Work Order (IW 38/39) reports.

- The usage report (ZLO1193) now includes a column for the sort field (district/gang).

- Subject Matter Experts (SME’s) have been identified for all DOTD districts, they are identified on the intranet site under Operations > Maintenance Systems

- Working to implement the preventive maintenance component of Plant Maintenance
  - Identify when equipment is due for preventive maintenance based on system record of odometer/hours
WHAT IS AGILE ASSETS...

- Maintenance Management System
  - Linear Assets
  - Captures Work Orders for Road and Structure Assets
WHAT DATA IS CAPTURED IN AGILE...

- Labor
- Equipment
- Material
- Location
  - LSR-ID
  - Asset
- Activity
  - 300 +
- Accomplishment
- Comments
ASSETS IN AGILE

• Currently in Agile:
  • Traffic Signals
  • Interstate Signs
  • Sound walls

• In process of collecting data:
  • Guardrails
  • Cable Barriers
  • Sign Trusses

• Next on list to start collecting:
  • Cross Culverts
  • Signs on all other routes
  • Attenuators
WORK ORDER RESPONSIBILITIES

• Clerk
  • Create Work Request
  • Create Work Order
  • Audit Work Order
  • Complete Work Order

• Foreman
  • Create Work Order
  • Upload to PDA
  • Perform Work and Make Day Cards
  • Upload to Agile System

• Supervisor
  • Approve Work Order
  • Complete Work Order

• ADA Operations, Area Engineers, DA’s
  • Run reports to look for errors
  • See work accomplished
STORED DATA FOR AGILE...

• Work Orders DO NOT “Go Away” After Completion

• Agile Work Orders can also be found in SAP (Cost Only)
  • Backup is done Nightly

• Agile Interfaces with SAP Nightly
  • Updates are done Nightly
HOW TO GET DATA OUT OF AGILE...

• Reports
  • Work Orders
  • Costs
  • Accomplishments
  • Material Usage
  • Equipment Usage
  • Work on a LRS-ID
  • PDA Usage
  • Reimbursements/WBS
Mobile Solutions...

- Current
  - PDA
  - Laptops
FUTURE UPGRADES TO AGILE

• Upgrading to version 7.2 this year
  • Better GIS capabilities
  • Tablet mobile devices
  • Better field data collection

• Implementing Level-of-Service (LOS)
  • Budget planning

• Implementing new modules
  • Bridge management module
  • Roadway management module
QUESTIONS...
Maintenance Management Systems (Section 42)

Equipment Acquisition Program/Process

Louisiana Transportation Conference
February 26, 2018
Equipment Acquisition

- Section 42 handles equipment acquisitions for fleet of 5,500+ units of equipment statewide at an estimated replacement cost of $205M

- More than 60% of equipment exceeds age replacement criteria
  - Average age of equipment is 14 years, and the equipment backlog exceeds $100M

- $2M - $12M annual program for outright acquisitions

- Annual buy-back program, in FY 2018 - totaled 156 pieces @ $18.4M
Buyback Program

- Vendor driven, quantities dependent on what vendor(s) project they can sell to the market
- Model, configuration, options also dependent on what vendor believes is most viable for resale
- Maintenance costs are drastically reduced by replacing equipment each year when compared to equipment that is owned over a longer period of time.
- Districts/sections can reduce buybacks for credit against that FY’s allocation
- Districts/sections can add buyback (if viable with vendors) for debit against that FY’s allocation
- Contact the Equipment Engineer (Bill Schear) prior to the new FY to discuss any desired changes
Maintenance Management Systems (Section 42)

Buyback Program

- FY 2018 - 156 pieces
  - Total cost to purchase: $18.4 Million
  - Proposed buy back total: $20 Million

- Current Buyback Equipment
  - 9 – Excavator, 1.0 CY, Tracked
  - 34 – Excavator, 0.3 CY, Tracked
  - 22 – Grader, Motor, All Hyd, Articulated
  - 24 – Tractor, Wheeled, 70 HP
  - 6 – Tractor, Track-Type, 145 HP (Dozer)
  - 21 – Tractor, Loader, Backhoe, 4WD, w/ Pavement Breaker
  - 11 – Tractor, Loader, Backhoe, 4WD
  - 29 – Loader, Front End, 4-Wheel, 3.0 YD
Maintenance Management Systems  (Section 42)

Buyback Program

• Began in FY 1993 as $400K program, has grown to $18.5M in FY 2018
• Program has netted ~ $17M total more in proceeds than purchases since 1993
• In the last 10 years, has average net cost of +$1.6M annually
Maintenance Management Systems  (Section 42)

Equipment Acquisition Process

- Each district or section identifies their own replacement priority. The final priority list is then input into the Sharepoint site on the LA DOTD Intranet page:
  - Sharepoint > Operations > District/Section Equipment Request Lists

![Sharepoint Link](image-url)
Maintenance Management Systems (Section 42)

Equipment Acquisition Process

• The statewide equipment unit determines the distribution of total funds to each district
  • Historically, this has simply been the total ÷ 10 (9 districts + HQ) for an equivalent split

• Purchases are then made in basic overall priority as submitted
  • Sometimes, there are exceptions – to increase quantities, etc...

• Typical annual sequence:
  • Buybacks are the first item addressed in each FY
  • Contract purchases are next (fleet vehicles, some excavators/mowers/tractors)
  • Non-contract, high quantity purchases (example: dump trucks)
  • Non-contract, low quantity/specialty purchases (example: bucket truck, mud jack)
Equipment Acquisition Process

- Once equipment is ordered, there is a typical lead time for delivery that can range from 3 months to 1 year or more

- Once equipment is received, it is not immediately ready for pickup
  - Must be inspected against specifications and for operability, any issues must be resolved
  - Obtain title and registration from OMV
  - Process payment to vendor
  - Affix DOTD decals to vehicle

- District or section will be contacted to pickup once these steps are accomplished
Maintenance Management Systems  (Section 42)

Equipment Acquisition

- New in FY 2018 – replacement of equipment declared a total loss
  - No longer need to wait until next replacement cycle
  - Will not count towards your current FY allocation
  - Small pot of funds retained for this program each year, claim payments used to offset
  - Proof of replacement must be provided:
    - Purchase agreement (PO)
    - Proof of payment
    - Copy of title
  - In the event of total loss, notify Maintenance Management Administrator (Kevin Reed) and Equipment Engineer (Bill Schear) to initiate replacement
  - District/section ORM contact is responsible for coordinating with ORM/Sedgwick and equipment unit, receiving payment and forwarding to Financial Services for deposit
  - If proof of replacement cannot be done in 18 months – contact Maintenance Management Administrator & Budget Director (Barbara Aguillard) to arrange alternate payment method.
Equipment Acquisition

• Coming in FY 2019 – repair vs. replace option
  • Scenario – equipment requires major repair and is nearing end of life cycle, district/section is willing to put funds to accomplish repair towards replacement instead

  • Will involve “application process” to equipment unit.

  • Minimum criteria for consideration to be established (form)

• If approved, Section 42’s equipment unit will utilize a funding amount set aside for this purpose to “match” the district funds to replace rather than repair
Contract
Maintenance

A Brief Manifesto
Contract Maintenance Activities

DOTD has over 16,000 miles of roadway, but a force of only 1100 to maintain these roads.

DOTD also has over 300 miles of cable barrier, and more being built. Repairs would fall to those maintaining the roadways, or those maintaining the nearly 8,000 bridges around the state.

Lastly, DOTD has over 4,000 traffic signals statewide, and a crew of just over 50 to maintain them.
Contract Maintenance Activities

These are contracts that DOTD advertises for public bid. The majority have a term of one year, with an option to renew for additional one year terms to a maximum of five years total.
Contract Maintenance Activities

Repair of Impact Attenuators (Crash Attenuators)
• Managed at HQ as one statewide contract

Repair of Cable Barrier
• Managed at HQ as one statewide contract
Contract Maintenance Activities

Repair of Guardrail
• Managed by the districts for their respective areas (except D58 is rolled into the contract for D05)

Repair of Bridgerail
• No current contract
• Working on a statewide contract to be managed at HQ

Loop Repair
• Currently only one active contract for D08 Traffic Loop Detector Maintenance
Contract Maintenance Activities

Mowing Contracts
• Just under 40,000 acres currently mowed under contract
• Setup by districts
• Breakdown by district management needs -single parish, multiple parishes, multiple routes in multiple parishes
• Breakdown also based on what contractors can be expected to complete within the limited time allowed each cycle
Contract Maintenance Activities

Sweeping Contracts
- Covers a select few major routes
- D05 has two contracts, one of which is specifically for the I-20 bridge over the Mississippi River.

Rest Area Maintenance
- Upkeep and maintenance on facilities and grounds

Rest Area Private Armed Security
- Service contract through DOTD’s Procurement section and approved by the Office of State Procurement (OSP)
Contract Maintenance Activities

Disaster Debris Removal & Disposal
• Standing contracts for regions of state
• Activated in response to hurricanes and other disaster events.

Debris Monitoring
• Retainer contract that is advertised and executed through DOTD’s Consultant Contract Services section.
• Works in conjunction with our Debris Removal & Disposal contracts to track what activities and costs may be eligible for reimbursement under FEMA or FHWA guidelines.
Maintenance Agreements

These are Cooperative Endeavor Agreements between DOTD and other entities of the state (municipalities, parishes, sheriff office, etc.) to perform maintenance activities on DOTD assets.

Mowing Agreements
• Work is on state routes in area and is measured by miles of roadway
• Pay is on a standard pay scale by road type (Undivided, Divided, or Interstate)
• Limited number of cycles that DOTD will pay for each year
Maintenance Agreements

City Signal Agreements
• Smaller cities - provide power and replace bulbs as needed
• Larger cities - full maintenance agreements
• Pay is on a standard pay scale per signal for each type of agreement
Maintenance Agreements

Rest Area Security
• Agreements with local Sheriff to provide armed security at rest areas

Litter Collection
• Agreements with local Sheriff to provide litter pick-up and collection along certain state routes
QUESTIONS?